Continuation of "Selling Electricity".

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ELECTRICAL MERCHANDISE AND SELLING ELECTRICITY

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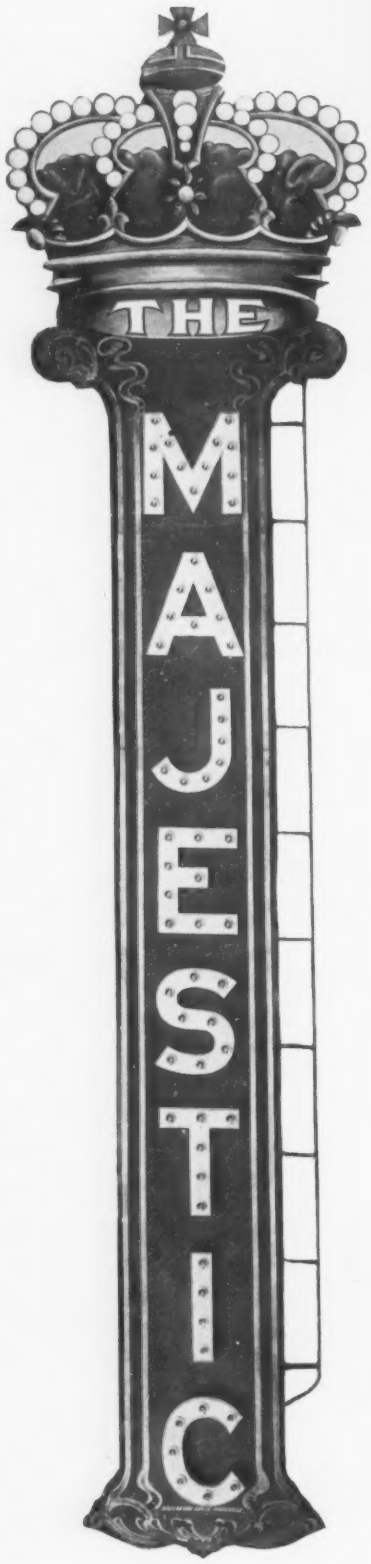

These two Signs are plain and simple, but they're strong in character and personality, and that's what counts.

When the Greenwoods went into the Electric Sign business, a good many years ago, it wasn't because they needed the money and that looked like the most hopeful chance. The Greenwoods have been artists for generations, but they have been successful business men too; and they saw in the growing popularity and power of electric signs a big opportunity for the manufacturer who could INSPIRE every sign he built with absolute

Individuality

That is the secret of Greenwood success. It is founded on an idea that has produced thousands of satisfied sign advertisers; thousands of kw. in nightly consumption. We sell no stock signs. We make no signs that "suit any business." We design electric-salesmen to sell goods. Each sign is studied by an expert, to produce the strongest possible appeal to the class of people the owner must reach.

We maintain this standard of individuality no less in the small, inexpensive signs than in the big and costly ones. These two signs are not large; but have you ever seen anything just like them? And every sign the Greenwoods build is made of metal and the best construction and finish that brains, ambition and experience can devise.

See that your customers buy this kind of sign from

Greenwood Advertising Company

Knoxville, Tenn.

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ELECTRICAL MERCHANDISE
and SELLING ELECTRICITY

VOLUME XI APRIL, 1912 NUMBER 4

CONTENTS

PUBLISHED MONTHLY BY THE RAE COMPANY

FRANK B. RAE, JR., President and Treasurer
EARL E. WHITEHORNE, Vice-President
W. C. ANDREWS, Secretary

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SERVICE, as we understand it, means the elimination of mistakes, trouble and waste. It means doing the right thing at the right time—anticipating delays, providing against error, insuring accuracy.

Such service appeals to the lamp buyer who values his own and his employees' time and peace of mind.

Without claiming perfection, we do claim that we come nearer our ideal of real service than any other lamp organization, and we believe that our distributors are equally alert in meeting the demands of the critical lamp buyer.

As to quality of product, the Colonial Mazda label is in itself a guarantee.

COLONIAL MAZDA

Colonial Electric Works

of General Electric Company

WARREN, OHIO

ELECTRICAL-MERCHANDISE
AND SELLING ELECTRICITY

Edited by FRANK B. RAE, Jr. EARL E. WHITEHORNE, Managing Editor

Reforming the Appliance Policy

How the Brooklyn Edison Company Made a 71% Increase in Appliance Profits Through the Adoption of Retail Merchandising Methods

By Frank B. Rae, Jr.

ANNUAL profits of $5,200 are not to be despised even by the largest of central stations. The sum represents interest on over $100,000 worth of bonds. It is a good, fat salary for almost any manager outside of metropolitan companies. It is the amount, almost to a cent, of the net profit in 1911, of the appliance bureau of the Edison Electric Illuminating Company of Brooklyn.

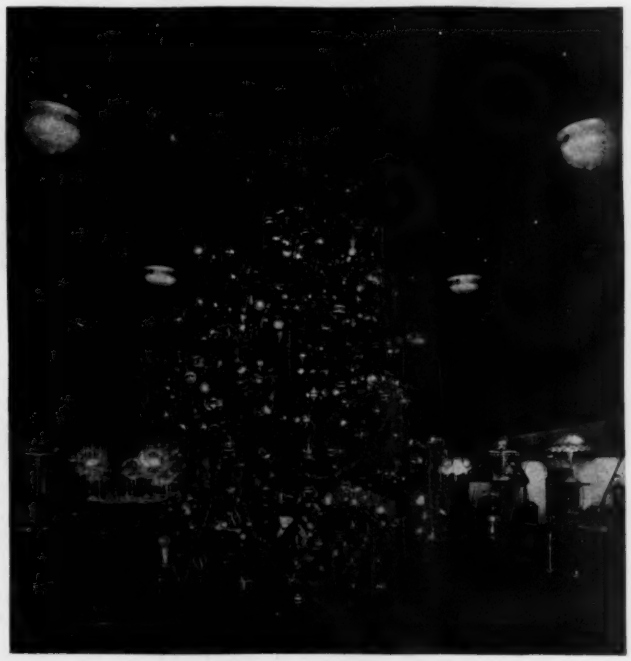
A few years ago, the idea was held in Brooklyn, as in a good many other places, that the way to get appliances on circuit was to give them away or sell them at cost. Today, Mr. T. I. Jones, sales manager of the Company, says, "Price is practically no factor in the sale of appliances." And judging by the cold figures that enter into the last annual report of the Company's appliance bureau, Jones is right—to the extent of $5,200, at least.

This is not a criticism of the men who advanced the give-away theory: that was accepted once as gospel everywhere. But times are changing, the industry is making rapid strides; the day of the something-for-nothing inducement in the electrical appliance business is giving way to sounder commercialism which recognizes that an unprofitable business transaction is unbusinesslike.

The appliance salesroom of the Brooklyn Edison Company compares favorably with the salesroom of any high-class merchandising establishment. It is not unduly elaborate. The mistake of making a central station display room so ornate and rich in furnishing and equipment that the ordinary $1.87-a-month consumer who visits it is overawed and self-conscious, has not been made in Brooklyn. On the other hand, the most scrupulous care is taken of all the stock; there is not a lamp displayed that is not ready at the turn of the switch; not an appliance is on the floor that cannot be demonstrated instantly. Everything is clean, orderly, ready. The floor saleswomen are thoroughly familiar with every appliance, its value, its price, its cost of operation.

The "Edison Shop," as it is called, is located at the Company building in Spruce Street, a side street which receives no transient trade whatever. At the back of the room is a cashier's cage where bills are paid and a counter where contracts are arranged. Persons coming to the Company offices either to pay bills or contract for service are thus compelled to pass through the salesroom twice. At the front of the room are the desks of the appliance manager and her assistant, where the bureau reports and detail clerical work is carried on.

The bureau is in charge of Miss Clara M. Reeves, who is assisted by one floor saleswoman, two outside demonstrators, a delivery boy, and a repairman. The delivery boy has a light electric delivery wagon bearing the inscription "Edison Shop" in addition to the Company name. The repairman has charge of the setting of all appliances for demonstration, while the keeping of the stock in good condition is taken care of by the young woman on the floor. The salaries of the entire six people are charged against the appliance profits, while the rent is divided between the appliance bureau and the contract and book-keeping departments which have space in the room.



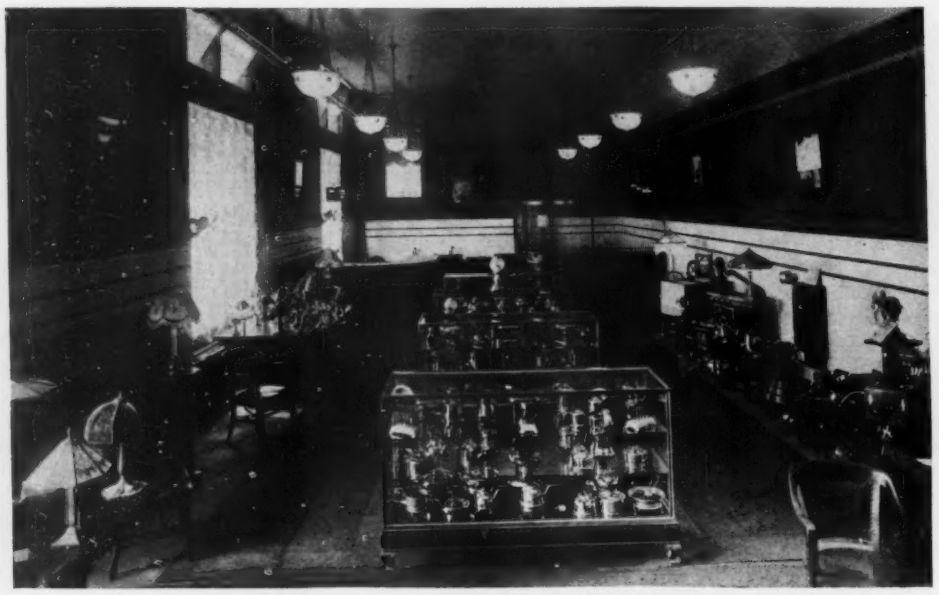
Christmas Feature of the Brooklyn salesroom.

So much for the bureau, its personnel, and equipment. Let us take up the work it has done and examine its balance sheet.

A year ago, the report showed that the Company had sold, in round figures, 2,000 appliances of all sorts, ranging from miniature lamps for Christmas tree outfits to two-kilowatt water-heaters. In 1911, the sales increased by approximately 75 items per month, or 900 in the course of the year. The selling prices of the 2,000 miscellaneous appliances amounted to $15,000 and the 2,900 appliances sold for a trifle under $19,000. The profits on the 2,000 appliances were, roughly, $3,000, while last year $5,200 was made. Here we have an increase of 45 per cent in the number of appliances sold, an increase of 27 per cent in the price each and an increase of 73 per cent in net profit.

This increase in profit was not due entirely to the increase in selling price, as may readily be seen. Part of it was due to more careful buying and a disposition to select the best article of its kind for the money rather than to the handling of a single manufacturer's entire line. It is my belief that prejudiced buying has had much to do with the comparative non-success of electrical merchandising. A central station or contractor decides to use a certain manufacturer's goods. The goods probably average well, but in the line will be found some items which are neither as well-designed nor as low-priced as similar appliances made by some other manufacturer. In spite of this fact, the goods are too frequently bought on the strength of the name-plate rather than upon an unbiased appraisal of each appliance. Another point: a great many men who handle electrical goods think

they must have a different line from that carried by a competitor. This is the baldest mistake, as an examination of the stocks of any first-class store will reveal. Every druggist handles Pear's Soap; most good haberdashers handle Keiser Cravats; while Heinz Pickles, Ingersoll Watches, and Pall Mall Cigarettes are everywhere. The retail merchant may be prejudiced in favor of one line and against another; he may strongly advocate "something just as good," but he very seldom lets his personal preference stand between him and a profit. He is in business to sell what people want to buy. The electrical appliance dealer may be able to sell the particular pet line that he restricts himself to, but even now the demand for a varied selection is strong; the man with one line already finds himself heavily handicapped. And the real handicap is in the price-and-profit factor. The best price from the customer's standpoint and the largest profit from the dealer's standpoint are both found in handling a stock selected with a view to giving the best appliance for the money—not in the stock selected from a single catalog.



The appliance salesroom of the Edison Electric Illuminating Company of Brooklyn.

To show how this idea works out in Brooklyn, we might cite the commonest item on the electrical appliance dealer's list—the electric flat-iron. In 1910, the Brooklyn Company paid an average of $3.75 each for irons; in 1911 $3.13 was the average price. Here alone is a little item of 62 cents clear profit on each appliance. But the Brooklyn policy is not one of close buying, but of profitable merchandising; so despite the saving in cost, the Company pushed up the selling price to where it must be for a retail dealer to make a fair margin, the irons being priced at $4.60 in 1910 and at $4.90 in 1911. These, of course, are averages for all sizes of irons. The margin in 1910 was 85 cents; in 1911, it was more than double that amount, or $1.77 each.

In toasters and toaster stoves we find a similar situation, though the difference is not so marked. The stoves were bought at an average price of $3.66 each in 1910, and at $3.59 in 1911. The selling prices were $4.55 in 1910 and $4.77 in 1911, giving a margin of $1.18 against 89 cents. The largest advance was made in vacuum cleaners where the profit jumped from $11.15 to $20.75 per machine.

The object of the Company in reforming its appliance policy was not alone to make a reasonable profit on its own appliance sales, but to enable the contractors and electrical goods dealers to make reasonable profits also. This policy of co-operating with the trade—and compelling the trade to co-operate also—is fundamental in Brooklyn. To bring the divergent interests together has been no small job. There, as elsewhere, were men in the allied electrical fields who could see no farther than the immediate profit—men who were convinced that the lighting company was their enemy and who let prejudice blind them to their real interests. The Company's annual dinner to the contractors and a policy of honest and earnest co-operation, has pretty nearly wiped out this antagonism. The present appliance policy has been no small factor in bringing the contractors into line. The Company fixes 25 per cent as a fair margin of profit on appliances, charging the goods, transportation, cartage, demonstrators' salaries, and rent as part of the cost.

But while anxious that the electrical merchandise trade shall have a fair margin between the cost and selling price, the Company also sees to it that goods shall be priced fairly to the customer. For example, there was a brisk exchange between the Company and one of the leading department stores over prices for portable lamps. Both purchased lamps from the same manufacturer and it so happened that both selected some of the same models. In 1910, when the profit was kept down, the department store man gave voice to a loud howl because the Edison Company was cutting the market to pieces. That year, the Edison price allowed a margin of $2.75 per lamp. After the conference, the Company raised its prices to where the average profit was $3.18 per lamp, but even this was unsatisfactory to the department store, which claimed that it could make no money unless at least 100 per cent were added to the cost. The Company "stood pat," however, and today portable lamps in Brooklyn may be purchased anywhere with a reasonable price. Incidentally—and to show that fair prices do not affect the volume of sales—the Company sold 115 portables in 1911 as against only 25 in 1910.

One might continue through the entire list of appliances, citing each item to show how successful is the profit policy in the sale of electrical merchandise, but the instances mentioned are sufficient to make our point. On all standard appliances, the number sold in 1911 shows a healthy increase over 1910 sales. Some items fell off, but these generally were appliances which are superseded by more modern utensils. Practically all of the new designs having merit were handled and their sale indicates that the public appreciates the progress which appliance designers are making toward greater utility and a better understanding of the housewife's prejudices and preferences.

Now, simply from the current-consumption standpoint, let us look at this appliance business. The flat-irons sold in 1910 and 1911 call for 540 kilowatts. It is conceded that flat-irons average about one hour's service per week. This gives the company 28,080 kwh. additional consumption at lighting rates, each year. The total appliance load for the two years amounts to 970 kw., and if we figure appliances other than flat-irons are used on the average 15 hours per year, this adds 5,590 kwh. to the annual current sales, or a grand total of at least 33,670 kwh. This is a large figure, even in a city like Brooklyn, yet it is not big enough to show any profit to the company if the give-away policy of selling appliances at cost is carried out, for merchandising costs money. To figure that a clerk in the office can take care of even a small appliance department without extra expense to the company is just as fallacious as to figure that a few kilowatts more or less of load on the station is no factor. The idea that the machines turn over anyway, and that a few lights more or less make no difference is one long held by the public which we call "ignorant." We are just as ignorant when we try to figure that the time spent in selling or demonstrating appliances costs nothing. Merchandising costs money, and there is not enough money in the sale of 33,670 kwh. even at lighting rates to pay the cost of demonstrating, selling, delivering, repairing, accounting, and collecting for the 5,000 appliances sold in those two years.

I do not believe that any profit was ever made by giving away appliances or selling them at cost. It is all right to *estimate* a highly profitable income, and some few cases are on record where actual figures show the appliance income averages much higher than the above estimate, but as a general thing electrical appliances are not used very regularly after the novelty wears off. The appliance sales policy that is founded upon the ultimate profit to be earned from current supplied to those appliances, is on a mighty shaky foundation. The income may not develop. On the other hand, the appliance policy which is founded upon the sound business principle that every "dollar which passes through your hands should leave a few cents of profit sticking to your fingers," automatically insures not alone a definite success to the lighting company but it means prosperity to the trade at large.

Ripening Walnuts by Electricity.

An interesting new application of central service has been discovered in the California walnut country. The ripening of the nuts is now being artificially accelerated by placing the green nuts in trays, arranged in cabinets, beneath which there are electrically heated grids. Air is blown through the heated grids at low speed and warmed and thoroughly dried before passing over the walnuts and it is possible by this means to accomplish in 24 hours, a drying process that usually takes from a week to ten days, according to the weather.

From Us to You

As this magazine reaches you—under a new name, with a new size and a new make-up, yet in character unmistakably the same—natural curiosity and interest prompts two questions: What does the new name signify? Why has the make-up been changed?

Here are the answers:

The New Name

When you stop to think of it, the name "*Selling Electricity*" no longer expresses the commercial spirit of the central station industry. The central station commercial man of today sells more than electricity. He sells electric service: he sells electrical merchandise.

We chose the name "*ELECTRICAL MERCHANDISE*" because it *does* typify the spirit of the industry today. The central station business man and the progressive electrical contractor both recognize that they are, after all, merchants who sell service as well as merchandise to the people, and though these may vary in character, there is the common intent to develop the demand for everything electrical. It's all electrical merchandise, and *ELECTRICAL MERCHANDISE* is the natural, logical and suggestive name for this magazine, which co-operates with you solely to further this great work.

The New Make-Up

The advertising pages of a man's magazine are hardly second to the reading pages in general interest. You realize that the ads we print bring you news, bring you information, quite as vital as that in the editorial pages; yet we all know that so long as these ads were herded into isolated sections in front and back of the paper they were buried and their value largely lost both to you and to the manufacturer.

The most popular general magazine—the *Saturday Evening Post*—recognized and met this undeniable magazine weakness by distributing its ads throughout the reading pages where they are accessible, convenient and interesting to all.

We are not too proud to follow the lead of so successful a paper, and we believe that with the new make-up *ELECTRICAL MERCHANDISE* will be brighter and more easily readable than before.

Electrical Merchandise is and will remain Selling Electricity—the magazine of central station commercial progress. It will remain the same in character, the same in principle, the same in enterprise, enthusiasm and intent. But it will be a larger magazine, with larger opportunities, larger ambitions and a larger capacity for co-operation with you.

The Publishers

Inspiring Confidence in Appliances

By S. T. Rumpleton

Suspicion is the keynote of popular antagonism to public utilities. Remove suspicion and nine-tenths of the troubles with customers will disappear. It's not a simple thing to accomplish—it takes time and tact—but until you have the confidence of your customers you will have bickerings and needless complaints, demands for reductions in bills, "knocking" and defamation, in season and out.

The foundation of suspicion is ignorance. What people don't understand they fear. Take a meter, for instance. The average householder looks upon a meter as a form of perpetual-motion machine. He thinks it about as accurate as a weather forecast, as malicious as a hyena with the toothache. But show this same man the "works" of a meter, explain its operation and the care taken by the manufacturers in attaining accuracy, tell him of the serious and expensive work of the N. E. L. A. meter committee, and show him, by actual demonstration, how delicately and surely it responds to the slightest variation in load—do this,

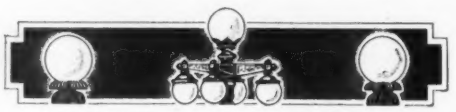
A confidence-breeding appliance ad.

and you have a booster who will take pride in upholding you among his neighbors and friends.

Every lighting company should do all that is possible to inspire confidence not only in its service and meters, but in the appliances it sells. Without exception, the appliances sold and recommended by lighting companies are the best on the market. In many companies, the most rigorous tests and experiments are made by engineers before the appliance manager is permitted to purchase any new goods. The public ought to know this and appreciate what it means. Because the company is interested in the sale of gas or current is the very reason why high quality is insisted upon. The old idea that appliances approved by the company are wasteful of current should be combated.

An excellent example of establishing public confidence in appliances is the subjoined advertisement by the East Ohio Gas Company. In this ad a good, common-sense reason is given why the company handles nothing but the best. "We want them to last, so you will always use them and *always use gas*," is a selfish reason, but it is convincing on that very account. The man who reads this ad can see *why* the company sells only the best appliances. He knows he is not being misled.

If this ad did not sell a single appliance it would be worth all it cost because it inspires confidence. Confidence and complaints don't go together very often.



Good Breeding in Business

A good many men who are gentlemen before eight in the morning and after six at night are boors during business hours. They seem to work upon the principle that good breeding is bad business, and that a smile, a kind word, or the display of even slight amenity is as reprehensible as tampering with the time clock or forcing a trial balance.

Fortunately, this notion is beginning to die out. We don't hear churlishness excused by that trite phrase, "Business is business," so often as we once did. We don't receive so many letters that insult us by their abruptness and lack of human feeling. We're no longer ashamed to be reasonably cheerful while earning our pay and we've most of us found out that a few words of "josh" will do more to promote business efficiency than a gruff disregard for the sensibilities of everybody within earshot. And the reason is that we've learned something of the money value of politeness. Here's a case in point:—

In the average central station, when a complaint has been investigated and the fault, if any, corrected, the matter is allowed to die a natural death. All complaints leave a trace of irritation, and in the average office there is small disposition to do more than remove the cause. But the Georgia Railway and Electric Company has other views. A complaint there not only receives the attention it requires, but after the matter has been adjusted the resultant irritation is cleverly salved over by a letter from the contract agent. It is a real letter, pounded out upon the typewriter and pen signed by the official himself. Not the slightest item is slurred; not the most sensitive person could fail to appreciate that here is a business communication from a man who is sincerely sorry that the error or misunderstanding occurred. This is the form used:—

Dear Sir:—

It is reported that you have requested assistance on account of some trouble in the electrical service furnished to you by us, and that the necessary adjustment of the trouble has been made.

We hope that this adjustment is entirely satisfactory to you and that you will call upon us again for similar assistance whenever you find it necessary.

Simply call Bell Phone 4945.

Very truly yours,
Georgia Railway & Electric Co.,
Wm. Rawson Collier,
Contract Agent.

Consider how much more effective such a letter is than the regular printed notice. It lifts the transaction out of the class of controversy between a soulless corporation and its victim and makes it an unfortunate misunderstanding between gentlemen which it is hoped has been adjusted to mutual satisfaction.

The same idea is carried out by this company in welcoming a new customer. Ordinarily the first communication a new customer receives is the bill for the initial month's service. But not in Atlanta. Here the customer receives a little note—also typewritten and pen-signed by the head of the contract department—welcoming him and extending the facilities of the company, thus:—

Dear Sir:—

We note with pleasure that you are a customer of this Company through your order to our Contract Department dated March 2nd.

We trust that your relations with us will be both pleasant and profitable to you, and to this end, the Contract Department has been instructed to extend to you all available facilities of good service. This service includes prompt attention to requests for assistance in case of trouble anywhere in the service that we furnish, and we trust that you will notify the Contract Department whenever their assistance is desired.

Simply call Bell 'Phone 4945.

Very truly yours,
Georgia Railway & Electric Co.
Wm. Rawson Collier.
Contract Agent.

This sort of thing pays. Most of us like to feel that we are something more than units in the scheme of the universe. We like to feel that we're appreciated. In the restaurant we like to have the waiter remember that we don't like ice in the drinking water; in our hotel we appreciate it when the clerk welcomes us by name; in the cigar store we're gratified when the clerk reaches for our special brand without being told. And the same is true of the people we serve. They're all a bit vain and self-important. They may be boors, but they like to be treated as gentlemen. Good breeding in business pays.

"The Great Policeman"

The following tribute to electric light appeared editorially on March 9th in the *New York Evening World:*

"Ghosts have fled before the electric light, according to a physician lecturer. Ghosts have disappeared just in proportion as our means of lighting have increased," said the doctor, and went on to point out that until 1825 people used mainly candles, which so far from lighting up, make shadows and dark corners all the blacker. Moreover, in the old days of draughty corridors and creaking staircases people lay in bed in the dark, listening to noises and imagining spirits. Now we turn on the electric light and that is the end of them.

"We owe much to the electric light. It has cleared up the slums of our cities. It has gone into the fearsome byways and alleys and flooded them with safety and purity. It has routed thugs, prowlers, and many other powers of darkness. Perhaps nothing has ever done more to lessen crime and depravity than the street lighting, made possible by the wide use of electricity in cities.

"The arc light is the best policeman on earth. It is the sworn foe of crooks. If it is clearing out the spooks as well, the more credit to it."

A People's Question Box.

A new feature has been introduced in the "People's Electrical Page," as published in Cleveland, Ohio. A "People's Question Box" has been started and numerous inquiries are being received from the public on various subjects electrical in character. The questions and answers are printed in the People's Page.

Electric Power for Irrigation

An Account of the Scope of This Development in the Territory of the Pacific Power and Light Company, and How the Business Is Being Secured

By H. S. Wells, Contract Agent

PERHAPS the most important branch of educational work which we have carried on is that of instructing the ranchers in the use of electricity for irrigation and other farming purposes. Besides personal solicitation, the State Fairs have offered an exceedingly good opportunity for demonstrating the uses to which electricity can be put on the farm. A pumping outfit in actual operation attracts attention. In some cases we have even gone further and have had on exhibition a small model irrigation plant, showing not only the pumping of water but also the method of distributing it over the land. Besides pumps we have exhibited feed choppers, milk separators, and other similar machines in actual operation. In every case many inquiries were made and our solicitors took the name of each person inquiring, obtaining from him as much information as possible regarding his requirements and these records were followed up by personal solicitation later on. Printed matter was distributed and considerable newspaper publicity carried on in this connection.

The detail of this class of business is of particular interest, as it represents perhaps the one line of our commercial activity which offers the brightest future.

Our field for electric service in rural districts is indeed extensive. With several hundred miles of 66,000-volt transmission line it is obvious that we must cover considerable rural territory. These lines are built through perhaps one of the most desirable sections of the Northwest, that is, from the standpoint of electrical service. Thousands of acres of arid land, thirsty for water, lie adjacent to the lines, demanding power of some sort for irrigation purposes. This territory, the Yakima Valley, Columbia River Valley, and Walla Walla Valley (with tributary valleys adjacent thereto) all have a very slight precipitation per year, yet they have an abundant supply of water under the surface, which, if pumped on the land, will change it from a desert to a garden spot. The only holdback, therefore, is a reasonable, efficient power for pumping.

Previous to the entry of electricity into the field, power of different kinds had been tested for pumping. Gasoline engines, oil and steam engines, water wheels, and in fact outfits of every description have been tried out, but the cost of their installation and operation has been too high to justify their use extensively.

The government and private concerns have built ditches reclaiming a part of this territory, but the vast amount is still to be irrigated. It has never had a chance to go ahead, but is anxiously waiting. The arrival of electricity seems, therefore, to have offered a solution of the problem and consequently we find a broad field for the sale of electric power

The rivers runn ng throught his territory offer an abundance of water. The Columbia River, for example, flows more water per year than the Mississippi, and, though falling some 20 feet during the dry season, still it has a great abundance of water the year around. The same can be said of the Yakima River as far as the abundance of water is concerned. Though this latter river is not used very much for pumping purposes, still it cares for a great deal of this country through seepage and allows the different ditch companies to have an ample supply of water for their ditches during the irrigation season. There is one feature regarding the Columbia River which has a peculiar interest, which is that high water appears during the summer when the most water is needed. This means that the pumping heads are decreased and the amount of water to be secured on the land is increased without an increase in expense. And though the Walla Walla River runs practically dry during the summer months, still the country adjacent absorbs so much of this water that well pumping is feasible the year around.

Well pumping is almost universal. Even along the banks of the rivers the average rancher prefers pumping from this source rather than from the river itself. Generally, a well is put down for every 20 or 40 acres and a pumping installation put in at every well.

In certain localities artesian water is found, but the water pressure is not quite sufficient to furnish a flow necessary to reach the high points of the land; therefore, auxiliary pumping is necessary and a centrifugal pump is attached to the well pipe. In this manner, with very little power, a large amount of water can be raised. This auxiliary type of business is growing rapidly as the artesian territory is extensive.

The government and private ditch companies have many miles of ditches through the higher lands in this territory which offer the necessary supply of water, but they do not take care of the land lying above these ditches. The land owners on this higher land, therefore, buy water rights from the ditch companies and install pumping plants, pumping out of the ditches themselves. This kind of irrigation is, of course, expensive and it is only feasible on land which is put into fruit or cultivation of that order, which brings large results per acre.

Since irrigation is necessary and the water supply is at hand the question simmers down to an economic basis. The average rancher can afford to pay only a limited amount for pumping, and in the past few years most of the failures have arisen from too high costs of water. Practically every possible method of raising water to the and has been tried, but in almost every case these attempts have met with but poor success—not so much mechanically as financially. The land can earn only so much revenue and consequently can stand but a limited charge for irrigation. The gas engine, steam engine, and water wheel have, each in their turn, failed to meet the economic requirements. The original investment, maintenance charges, interest, operation, and depreciation were all too expensive. The power, therefore, that can be installed, maintained, and operated economically is the power that will be used.

Irrigation exhibit at Washington State Fair, North Yakima, Wash. Water was pumped to a miniature orchard and actually spread over the ground.

The requirements are filled by electricity. The cost of operating motor-driven outfits appears most favorable when compared with the cost of operating with other power.

As compared with the gasoline engine, electric power has a great many advantages —its cheapness of installation, operation, and maintenance and the low percentage of depreciation being the principal ones.

Competition against steam outfits does not greatly figure except in large installations, and it is difficult to offer accurate figures in this comparison as it must be taken up in each individual case. Local conditions practically decide the issue. However, except in installations of 100 horsepower and over, the initial cost of installation of the steam plant as compared with the motor, obviously favors the motor to a high degree.

The use of water wheels has been tried along the Columbia, Yakima, and Walla Walla rivers, but with no success. Outfits of various types have been installed and in

every instance have been a failure—hence, the use of this method of pumping is eliminated.

Irrigation ditches are not exactly competitors—in fact, in many cases they offer a field for electric power. However, to some extent they may be classed as rivals for reclaiming the desert lands, and so may well be mentioned in this connection. In ordinary cases irrigation ditches cover land that is so high it would prohibit pumping, and the people above the ditches often require power to pump out of the ditches themselves. In certain territories we have considerable business of this kind. However, under some conditions the ditches really do compete with electric power, as on land, say under a 75-foot head, where the cost of raising the water is not prohibitive. Electric power in this field of service, in many cases furnishes water considerably cheaper than the ditch.

The following tables of the irrigation company's charges will best show the cost per acre per season, as compared with that of electric power.

Ditches

	Cost of Water Per Acre	Maintenance Charge	Allowance of Water	In Gallons 160 A	6.5% Int. on Inves't pr A.	Total Cost pr. A. pr. Yr
Sunnyside Canal	52.00	.95	3 acre ft.	560	3.38	4.33
Tieton	93.00	1.50	2.17 acre ft.	415	6.04	7.54
Congdon	100.00	2.00	Second ft. to 100 A.	675	6.50	8.50
Selah-Moxee	35.00	2.00	Second ft.	450	2.27	4.27
Hanford	100.00	2.50	2 acre ft.	402	6.50	9.00
Kennewick	100.00	5.00	2 acre ft.	375	6.50	11.50
Prosser Falls I Co.	75.00	1.50	1 Cu. ft. 160 acres	450	4.87	6.37

Electric Power Cost per Acre Per Season.

Irrigating 160 acres by electric pumping, allowing 450 G.P.M. by 4-inch centrifugal pump—direct-connected.

Head	Hp. Required	Cost of Installation	Interest Depreciation	Power Charges	Total Yearly Charge	Cost per A. per Season
20″	5	$ 800.00	$ 92.00	210.00	302.00	1.90
30″	7	880.00	101.00	294.00	395.00	2.47
50″	11	1,010.00	115.00	462.00	577.00	3.60
75″	16½	1,100.00	127.00	693.00	820.00	5.13
100″	22	1,250.00	144.00	924.00	1,068.00	6.68
			Depreciation.....5 per cent			
			Interest.....6½ per cent			

The following shows the price of pumping plants for different heads, and will give a general idea of the cost of direct connected outfits.

Size	Capacity Gallons	Head in Feet, Including Friction and Pipe 25 Feet	50 Feet	75 Feet
1″	25	$135.00	$150.00	$210.00
		¾ hp.	2 hp.	3 hp.
1½″	75	225.00	250.00	275.00
		2 hp.	3 hp.	5 hp.
2″	125	250.00	284.00	360.00
		3 hp.	5 hp.	7½ hp.
3½″	370	375.00	465.00	600.00
		5 hp.	7½ h.p	15 hp.
4″	480	475.00	575.00	675.00
		7½ hp.	15 hp.	20 hp.

First column indicates size of pump.
Second column indicates number of gallons the pump will deliver at the given head. The head is indicated by figures at top of column under head in feet.
These costs cover G. E. Motors, 1800 R. P. M., Moran or American pump, foot valves, switches, fuses, blocks, wiring, etc., F. O. B. nearest railroad station, and one man to superintend the installation.

The type of installation used in irrigation pumping varies somewhat, but generally speaking, a direct-connected horizontal pump and motor are most commonly used. Vertical outfits and belted outfits are sometimes employed. The vertical outfit has not proven satisfactory and we are not encouraging the use of them; our experience in the past being that it is difficult to install it properly and consequently it does not work out satisfactorily for the customer. This particularly applies in small installations—either the shafting is not lined up correctly or the wall of the pit is not substantial, for the frictional losses are so great as to run up the horse power and, consequently, the bills against the consumer.

Looking down a well. A unique irrigation picture. A direct connected centrifugal pump and motor installed in a well, just above high-water mark.

Belted outfits are used principally where the use of electric power for other farm purposes is being started. Under these circumstances the rancher wishes to use his same motor for his food chopper and machines of that nature. The belted type makes this very simple. However, for general efficiency and satisfaction, the direct-connected outfit has proven the best. This applies both to well and river pumping and though the rise and fall of the river varies during the season, still, allowing the 17-foot variation, the direct-connected outfit will take care of it easily. The installation is placed a few feet above the high-water mark and can easily take care of the different pumping heads. The centrifugal pumps are usually for 75-foot head and under.

In the case of pumping to a high head the nature of the installation varies considerably. However, some types of plunger pumps are used—always belt-connected to the motor. These plunger pumps work efficiently at depths of 150 to 200 feet and perhaps at greater heads, though we have had no experience over 200 feet.

This table shows the cost of delivering given amounts of water over a given acreage at the regular irrigation rates of the company. This has been worked out carefully from actual tests and proves accurate in operation.

Two types of contracts are used for irrigation business — one for 25 horse power or over and the other for installation under 25 horse power. In all cases of irrigation business we are requiring a lien on the customers' property which will cover the amount of the customers' bills during the term of the

Horse power required to furnish different amounts of water at different heads.

No. of Gals.	At Ten Feet Elevation				At Twenty Feet Elevation				At Thirty Feet Elevation				At Forty Feet Elevation				At Fifty Feet Elevation				At Sixty Feet Elevation				At Seventy Feet Elevation			
	10 Acres	20 Acres	30 Acres	40 Acres	10 Acres	20 Acres	30 Acres	40 Acres	10 Acres	20 Acres	30 Acres	40 Acres	10 Acres	20 Acres	30 Acres	40 Acres	10 Acres	20 Acres	30 Acres	40 Acres	10 Acres	20 Acres	30 Acres	40 Acres	10 Acres	20 Acres	30 Acres	40 Acres
25	.70				1.40				2.70				2.80				3.15				4.20				5.25			
75	2.10	1.05			4.20	2.10			6.30	3.15			8.40	4.20			9.80	4.90			12.60	6.30			14.00	7.00		
125	3.15	1.60	1.05		6.30	3.15	2.10		9.80	4.90	3.30		12.60	6.30	4.20		16.80	8.40	5.60		19.60	9.80	6.55		20.10	10.05	6.70	
185	4.90	2.45	1.65	1.25	9.80	4.90	3.25	2.45	14.70	7.35	4.90	3.65	19.60	9.80	6.55	6.90	25.20	12.60	8.40	6.30	29.40	14.70	9.60	7.35	34.65	17.35	11.55	8.65

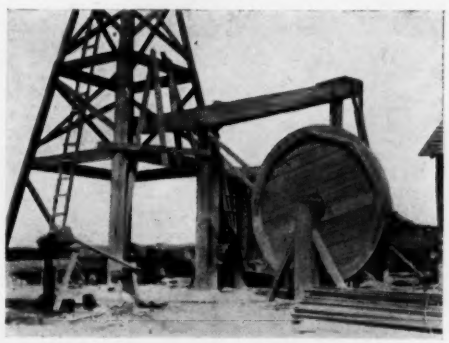
	40 Acres	80 Acres	160 Acres	320 Acres	40 Acres	80 Acres	160 Acres	320 Acres	40 Acres	80 Acres	160 Acres	320 Acres	40 Acres	80 Acres	160 Acres	320 Acres	40 Acres	80 Acres	160 Acres	320 Acres	40 Acres	80 Acres	160 Acres	320 Acres	40 Acres	80 Acres	160 Acres	320 Acres
265	1.58	.80	.40	.20	3.15	1.60	.80	.40	4.73	2.35	1.20	.60	6.30	3.15	1.60	.80	7.88	3.95	2.00	1.00	9.45	4.75	2.35	1.20	11.03	5.50	2.75	1.40
370	2.10	1.05	.60	.30	4.20	2.10	1.05	.60	6.30	3.15	1.60	.80	8.40	4.20	2.10	1.05	10.50	5.25	2.65	1.30	12.60	6.30	3.15	1.60	14.70	7.35	3.70	1.85
480	2.63	1.35	.70	.35	5.25	2.75	1.40	.70	7.90	3.95	2.00	1.00	10.50	5.25	2.65	1.35	13.15	6.55	3.30	1.65	15.75	7.90	3.95	2.00	18.40	9.20	4.60	2.30
750	4.00	2.00	1.00	.50	8.00	4.00	2.00	1.00	12.00	6.00	3.00	1.50	16.00	8.00	4.00	2.00	20.00	10.00	5.00	2.50	24.00	12.00	6.00	3.00	28.00	14.00	7.00	3.50
1100	5.90	2.95	1.50	.75	11.80	5.90	2.95	1.50	17.70	8.85	4.40	2.20	23.60	11.80	5.90	2.95	29.50	14.75	7.40	3.70	35.40	17.75	8.90	4.45	41.30	20.65	10.75	5.40
1500	8.00	4.00	2.00	1.00	16.00	8.00	4.00	2.00	24.00	12.00	6.00	3.00	32.00	16.00	8.00	4.00	40.00	20.00	10.00	5.00	48.00	24.00	12.00	6.00	56.00	28.00	14.00	7.00
2000	15.00	7.50	3.75	1.80	30.00	15.00	7.50	3.75	45.00	22.50	11.25	5.65	60.00	30.00	15.00	7.50	75.00	37.50	18.75	9.40	90.00	45.00	22.50	11.25	105.00	52.50	26.25	13.10

contract. These liens are duly recorded against the property. The minimum term for which we will take a contract for irrigation business is five years and we make every effort possible to have it at least ten years or more.

This company builds the line extension on a basis of the gross earnings for the first year, being not less than 35 per cent of the entire cost of the extension. We figure the cost of meters, transformers, etc., in the cost of the line. We furnish transformers in practically all installations.

A special department in the contracting department has charge of the irrigation business. The head of this department is in the field and has charge of the solicitors and jurisdiction over local managers as far as irrigation matters are concerned.

The method of getting after this business is practically through personal solicitation,



A deep well, plunger type pump. This is a home-made outfit but it pumps from a depth of 230 feet, by electric power.

though advertising in newspapers and circulars on the subject is carried on and exhibits at county fairs.

These irrigation exhibits prove a most effective means of reaching the farmers. At no time do we find so many of them congregated together as at these fairs, consequently every effort is made to make our display of the real uses of power most interesting. Not only are pumping outfits of different types practically demonstrated, but we even go further, and on occasions have had model farms showing the correct method of pumping the water and distributing it over the land. The other uses of electricity on the farm are displayed—feed choppers, threshers, etc.—all in actual operation. These exhibits are in charge of one of our power men at all times, and it is very seldom during the day that a good-sized crowd is not congregated around them.

The solicitors on irrigation work must of necessity be not only good electrical men but also familiar with the requirements of land and the method of handling the water on the land. The average farmer knows very little in regard to the efficient and economical handling of water and consequently it falls to the lot of our solicitors not only to advise as to the best installation, but also the necessary amount of water to be pumped and the proper way of handling it. On account of the varied information which these solicitors must have, we title them "Agricultural Engineers." It may seem that we are going further than necessary in taking so much responsibility in these cases, but it is absolutely necessary for us to make irrigation by electricity a success. A satisfied customer is our best advertisement and consequently we do all that we can to make him a booster. Not only do we look after the original installation, but keep very close watch during the season. Every month a test is made on the plant, test reports being sent to the head office of the New-Business Department and a record kept throughout the season. In case there is any change in the original data on installation, investigation is made and the defect corrected either by recommending it to the customer or, if the company is in any way to blame, making it ourselves.

Rural lighting and domestic power business has developed with the use of power for irrigation purposes, for wherever a pumping installation is installed there is a market for electric lights. To date, however, the undeveloped condition of the country prevents rapid strides along this line, but the near future should open up a remarkable

amount of business for the general use of electricity on the farm.

While this outline of our work in irrigation is somewhat cursory, the results have been entirely practical. During 1911, we connected up 112 customers with a total of 990 horse power, while we have in hand contracts from 56 more (amounting to 366 horse power) which will be connected up for the 1912 irrigation season. These represent only contracts which have been accepted; there are, of course, a considerable number pending.

"A Full Day's Work"

An Essay Contributed to a Company Competition and Winner of First Place.

By Howard A. Kelley
Sales Dept. Narragansett Electric Lighting Co.
Providence, R. I.

A full day's work means two things: a full day of work and a day of full work. These phrases seem simple enough and yet one's conception of their meaning depends to a large extent on his idea of what comprises a "full day" and what is meant by "full work."

In order to put in a full day of work, a man must be at his desk, ready for work, at the hour appointed for beginning. If he just manages to poke his nose inside the door at 8:30 1-2 and to be out at 5-01, he is losing from five to ten minutes on each end of his full day. And the same thing applies to the lunch hour; if he counts his hour from the time that he gets outside the door to the time that he gets back in, he will probably sandwich seventy minutes into that hour.

It can hardly be expected that a man will be able to work for several hours at a stretch, without a glance from his work, but it is hardly necessary to "pass the time of day" with everybody who passes and the bearing of the latest "white hope" on one's work is somewhat difficult to find. "Business is like oil, it won't mix with anything but business." Sociability is a great thing—after office hours. Ten minutes is a short time, but a half-dozen ten minutes, in the course of a day, make an hour or the eighth of one working day.

What is meant here by full work is possibly a little more difficult to grasp; for there is work and work, just as there are Jones and Jones; no two brands exactly alike. Which particular brand, then, is meant by full work? I should say that it is that work which has one's full attention. A man cannot do full work, and at the same time note all that is going on around him and everyone who comes and goes. It is the brand of work that makes an hour seem like fifteen minutes. The man who glances at the clock and says, "Why, it is four o'clock already," has been doing full work; the one who does the same and says, "Oh, gee, it's only four o'clock," has not. It is well said that a long day's work makes a long day short. Full work is the kind of work of which one speaks in his letter of application.

Everyone can do a day of full work, whether he is the boy who takes in the card or the man who receives it. If he does his best, no one will ask more; that is full work, the best.

In order to do the best work of which one is capable, it is necessary to take proper care of the body. The brain is closely related to the rest of the body and its condition depends on the condition of the rest of the body. That "morning after" feeling soon evidences itself in a man's work. It has been well said a man's days reflect his nights.

This paper has, intentionally, made no mention of overtime work or self-educational work, done out of working hours. It deals simply with what the company has a right to expect from every man, in return for the salary which it pays him. If he expects an advance in salary or position, he must be prepared to show an advance over what may be expected from him. A man should remember that while his extra work benefits the firm for which he works, it benefits himself far more. Nothing can be gained without work, almost anything by it. "For only by patience, practice, and ceaseless importunity can a man enter the Door of the Temple of Success."

Empire State Association Holds a "New-Business" Convention.

Probably the first convention of a large electrical association to be devoted entirely to the consideration of commercial subjects was the annual meeting of the Empire State Gas & Electric Association, held in Poughkeepsie, N. Y., on March 6th. It was a "new-business" convention through and through, and a distinct innovation in that there were no prepared papers, the entire day being given up to discussion. Various topics of commercial policy and experience were announced by the chairman, and "leaders of discussion" were prepared in each case to give the preliminary talk, after which a general discussion was in order. These discussions were free and enthusiastic and brought out a wealth of interesting facts and figures of the greatest suggestive benefit to all members.

The attendance was large and the convention was voted the most successful from a commercial standpoint, that the Association has ever enjoyed. The following subjects were discussed: advertising; solicitors' meetings; "stunts" for developing new business; appliance bargain sales; co-operation with architects, dealers and contractors; advantages and disadvantages of putting salesmen on a commission basis; wiring and piping old houses.

The Relation of the Central Station to the Wiring Contractor*

By C. R. Hayes, Manager, Fitchburg Gas and Electric Co., Fitchburg, Mass.

THE central station cannot expect the contractor's full support unless there is a pretty clear understanding between them of the policy of the company and the lines along which they both shall work, conceding to the contractor the right to do all construction work other than that in connection with the company's own lines and apparatus. Co-operation to the last degree is absolutely essential to the complete success of any plan involving action on the part of several. Therefore, the contractor cannot go out and solicit business successfully unless the policy of the central station is such as to insure a positive demand for that which the contractor has to offer. Similarly, the central station cannot undertake to create a large demand for wiring by means of advertising and solicitation unless assured of the support of the contractor.

An investigation of conditions in different cities brings to light the fact that various methods are being used to bring about very excellent results. We find that in some cases the contractors are working so closely in harmony with the central station that you are led to believe that they are in reality on its pay-roll. In other cities, the central station may have operated a wiring construction department for years and what few contractors that do exist are making more money installing an isolated plant here and there than they are otherwise. Intermediate, we find a city where the central station has been conducting a wiring department as a part of a campaign to increase business along certain lines, but has just given it up and is working out a scheme along co-operative lines, to the mutual advantage of both the central station and the contractor.

The question, therefore, before us both is this, "Is it necessary to go into the wiring business to properly push any new business campaign?" One says, "No!" another, "Yes, absolutely necessary!" and still another, "Well, we'll go into it, and stay until the contractor does as we want him to do and then we'll quit, but we will lose money doing it."

How about the contractor? In the first case he is busy and is having all he can do to attend to the work which the central station solicitor is pushing his way. He is ready to expand his organization to meet any new requirements, and in this way builds up a volume of business proportionate to the prosperity of the central station.

In the second case, where we find the central station positively opposed to the contractor, we are inclined to investigate personalities, either on the part of the contractor or of the representatives of the central station. We say this inasmuch as we are of the opinion that if the subject is frankly discussed and analyzed it is practically impossible not to obtain a solution satisfactory to both parties, unless it be that the personal equation is askew somewhere.

The third condition may be brought about, and I believe usually is, because the contractor is skeptical of the real intention of the central station in urging lower prices for certain classes of construction work. The contractor may fail to appreciate that certain classes of work can be done at a very close margin and at the same time without increase to his overhead expense and, we believe, without prejudice to the prices obtainable for other classes of work.

It is a fact that there are electrical wiring contractors where there is no central station activity, though the amount of work handled is small and the prices charged necessarily large. The central station may also exist and thrive without a single contractor in town, for construction work will necessarily be done by the central station so long as there is no one else to do it. We cannot conceive of there being a city or town served by a really aggressive central station, however, where the need for a wiring contractor has not resulted in there being one and more often, several. Both can exist without the other with a greater or less degree of success, but we believe that the central station should not be in the wiring business. Better results can be obtained if the contractor is allowed to act as an intermediary in the process of connecting customers to the lines of the central station.

The contractor must recognize that his business, and also his profit, will be larger if the central station is aggressive and successful, and in order to obtain the greatest profit he should endeavor to co-operate, that nothing shall stand in the way of a full public appreciation of the important part which the central station plays in the life of the community. The central station must recognize that inasmuch as the desire to obtain electric service precedes the necessity for electric wiring, it should bear the expense of practically all solicitation for new business. The demand for wiring created by the activities of the central station should be the

* Abstract of paper read before the Annual Convention of the New England Section of the National Electric Light Association, Hotel Kimball, Springfield, Mass., March 21 and 22, 1912.

means of a substantial business and a profit to the contractor.

The opportunity to obtain a large share of his business without spending a cent to create the demand should interest the contractor decidedly. The central station at the same time should insist that popular prices be charged for work thus turned over to the contractor. The failure on the part of the contractor to appreciate the justice of this often leads to the necessity of the central station conducting a so-called cut-price wiring campaign until a sufficient volume of business of a certain class is coming in to make it self-advertising.

The central station must assist the contractor to maintain a high standard of quality in all work attempted. If the contractor will take on work not at a loss but at a small margin of profit, the larger field opened up will in itself offer greater opportunities for profit which would not otherwise be obtainable. Each customer serves to bring another, and as soon as the ball is rolling, the expense of obtaining new business is greatly lessened.

What should be the policy of the central station regarding the sale of appliances, including motors?

The display and sale of electric appliances certainly constitutes a legitimate and necessary method of creating a demand for the central station output, for the success of the central station is largely dependent upon the number of current-consuming devices upon its lines. The interest of the contractor, however, must naturally center in the profit which he can make on a sale, and prices should be maintained so that the contractor will be able to make a fair profit and assist the central station by endeavoring to make all sales possible. The central station, therefore, should urge the sale of electrical appliances, and at the same time make its own sales at prices which will gain the support of the contractor.

Regarding the sale of motors, the profit is not enough to warrant the central station advocating the purchase of one make of motor, to exclusion of all others. The central station is interested to see that its customers have motors of good design and of a type suitable for their requirements, and in the matter of motor sales may well concede much to the contractor.

In a flat-iron campaign, I am inclined to the opinion that too low a price prejudices the customer into the belief that if the use of irons is so greatly desired by the company it is pretty sure evidence that they are expensive to use. The merits of the electric flat-iron are sufficiently great to make it comparatively easy to sell them at a fair price, and one which will lead the contractor to push its sale as well.

There is one appliance, however, which primalriy concerns the central station, and that is the incandescent lamp; for the practice of giving free renewals of carbon and gem filament lamps is essential to good electric lighting service. Even with this practice in vogue, a few lamps are doubtless sold by the contractor to customers of the central station and the local contractor does find a fairly large outlet for incandescent lamps among mills and shops which are not served by the central station. It is to these same customers that the contractor looks to sell the more costly tungsten lamps, and at a good margin of profit if he is protected by the central station.

Tungsten lamps have been and perhaps always will be sold by the central station at prices which are near, or even less, than cost. Contrary to early expectations, the introduction of the tungsten lamp has not decreased the earnings of the central station. It has popularized electric lighting to such an extent that the central station has endeavored to place them well within the reach of all, by means of price reductions. But these price reductions have meant much to the contractor, where the central station does not refuse absolutely to supply the mills and factories and tempts him to even up by selling to the central station customers the 15-watt tungsten, which as a rule the central station refrains from carrying, or perhaps the 10-watt, 8-candlepower lamps, which we understand will soon be on the market.

The remedy of course is for the central station to take the stand that it will sell tungsten lamps only to its regular lighting customers and in addition offer to its customers both the 15-watt and the 10-watt lamps if a reasonably long life is now attainable. It is our opinion that little will be gained in the long run by holding back the introduction of the lower candlepower tungstens. Electric lighting, to be popular, must be cheap and it will then be used more generally, with a greater net profit to the company. From the standpoint of the customer, the use of the tungsten lamp in reality means a reduction in rate.

Thus it must be evident that the relation of the central station to the wiring contractor is such that neither can afford to ignore the other. The more nearly the two work in harmony, the better will it be for both. The spirit of co-operation which is so essential to success can be brought about in many ways.

Certain central station managers are, at stated times, meeting all the local contractors together, and seeking to give all the same opportunity of a free exchange of ideas. In a number of cities, organizations or clubs are formed where the electric company employees and the contractors and their employees meet on a common ground for a common good. The National Electric Light Association is now urging the contractors and their employees to become Class E members, and more closely affiliated with the employees of the central station. This will bring together in one big organization every man who can be of assistance in making the electrical industry the most important industry in the country today.

"Our hat is in the ring," and the latch-string is out. It is up to the contractor to mix in.

More Legal Complications.

From the Western States Gas & Electric Co. of Eureka, Calif. comes a brand new question of law and order:—Can the electric sign projector trespass on the public highway? Must it pay rent or must it keep off? The highly involved situation that has arisen in Eureka is set forth 'n the following item, clipped from the local paper:

Jack Should Pay Rent.

For a man to use a public street for the purpose of advertising his own wares, is something of a novelty, but that is exactly what Jack Seely, the "clothing kid," is doing every night. This is accomplished by means of a patent electric lantern, which projects the lettering through powerful lenses to the surface of the roadway, making a novel and attractive advertisement. The lantern is arranged so that the sign can be thrown on the sidewalk or on the building opposite. It is reported that City Trustee Henry Seely intends drafting an ordinance requiring his brother to pay rent for the use of the city street, or quit using it, but there is some doubt as to whether the act would not be in conflict with the Constitution of the United States, so the matter is being held in abeyance.

Raises Potat

Articles on Industrial Lighting.

A series of articles on "The Principles of Industrial Lighting" is now running in the *Industrial Engineer*, a magazine devoted to the field of industrial efficiency. These articles which are written by Mr. Frank B. Rae, Jr., and commenced in the March issue, will discuss the general principles of good lighting in mills and factories and its influence on the prevention of accidents both to workman and work, and the increase of output and profits, through the higher standard of efficiency which the improved working conditions will induce.

The salesman will find much of interest and value in this series.

Electrical Progress in Atlanta

How the Salesmen Have Built up a Practical Co-operation between Their Advertising and Selling Efforts.

Mr. William Rawson Collier, commercial agent for the Georgia Railway & Electric Company, of Atlanta, has instituted a system for the distribution of educational literature which is a distinct achievement on the strict evidence of what it has accomplished. It practically makes the salesman responsible for the intelligent use of all such advertising in his territory, and for the obtaining of the highest possible benefit from it. It counts distinctly on his good record if the letter or pamphlet goes into hands that represent not only possible but logical business, and if when the seed is sown it is properly watered and brought to fruit.

A great deal of business has been developed by this company through the distribution of the magazine *Electrical Progress*, published by The Rae Company, 17 Madison Avenue, New York City. This is a 16-page publication of standard magazine size, written in popular style and devoted each time to one specific class of central station service, residence lighting, store and window equipment, electric vehicles, Christmas gifts, etc., with short, appealing articles and plenty of suggestive pictures. It does not bear the name of the central station, and therefore has every appearance of a little independent magazine and is read by the prospect without the natural prejudice he feels towards manufacturers' literature and signed company advertising. A home equipment issue goes to the residence list, a sign and store lighting number goes to the merchants' list, the electric vehicle number is put in the hands of merchants, manufacturers, and every man who operates trucks, delivery wagons, or salesmen's runabouts, as well as wealthy residents who should be interested in the pleasure car.

But Mr. Collier does not believe in hit-or-miss advertising; he insists that *Electrical Progress* shall reach the proper eye, and that the full benefit shall be secured by follow-up. The salesman is given a certain number of copies of each issue to be addressed personally by him to those of his prospects with whom he is actively working at that time. He writes a word to his residence prospect and says, "Here is a little magazine I believe you will be interested in, along the lines of our recent talk. It has a number of suggestions that I think will appeal to you." Or if it is a store number, he writes his store prospects.

But it puts it up to the salesman. He does not look upon *Electrical Progress* as "throw away stuff." It's ammunition and he's supposed to hit the bird. Every salesman knows that the people in his district to whom *Electrical Progress* is sent are logical prospects; and the live ones, the imminent ones, receive the personal note. And that's not all; the idea behind it is to get the business, and he calls on those prospects as soon as they have read *Electrical Progress*, and repeats the same convincing arguments that they have just considered, and the cumulative force of his follow-up is wonderfully successful. The object is to never let the prospect cool down till the contract is secured, and the salesman is made to feel that this advertising is his greatest selling aid and that he is expected to make it produce the very highest possible profit in sales.

Mr. Collier says that his men have used this method with enthusiasm, because it has proved a success. That shows what value there is in harmonizing your every sales effort.—Adv.

ELECTRICAL MERCHANDISE AND SELLING ELECTRICITY

APRIL, 1912

THE WRONG KIND OF ADVICE.

The adage that recommends "old men for counsel" received a rude shock in the *Electrical World* for March 2d. Be it known that we respect—even venerate—our larger contemporary: it is one of the few really great trade papers, ranking with the *Iron Age*, the *Dry Goods Economist*, and that all too small group of honest and powerful journals which has done so much to impel the American business and professional man to his present high standard. But for once the *World* falters.

The issue of March 2d contains, as leading editorial, a couple of columns entitled "Summer Load." In it, the writer points out and deplores the seasonal fluctuation of central station demand, suggests the value of fans and ice-making as factors in overcoming the fly-time depression, and finally gives voice to this remarkable example of illogic:—

"It still appears that the greatest chance for a profitable summer load is to be found in the use of minor electrical appliances for cooking and household conveniences generally. The electric flat-iron and the electric stove, coffee urn and chafing dish ought to build up in many places a very substantial addition to the output of the summer months.

"Now, electrical appliances of the kind mentioned at lighting prices are distinctly luxuries, and rather expensive ones, while at motor rates they may almost take their place as necessities. Electrical heating and cooking devices can never yield a substantial steady load and profit to central stations on ordinary lighting rates, and the sooner the central stations learn this lesson the better off they will be. It has been the custom for central stations, under whatever form of schedule operated, to make one price for lighting service and another price, generally a third or a half of the lighting rate, as the price of energy for motor service. The only legitimate reason for this distinction between the use of a kilowatt hour for one purpose and the other has been based on the undoubted fact that the lighting service requires a good deal more care and expenditure to secure the regulation that is necessary for that particular kind of work. This is the basis of a genuine distinction; yet when this very distinction is made it is entirely obvious that the electric range and flat-iron belong with motor rather than with lighting service. The maintenance of lighting prices for such appliances is merely, therefore, a measure of the indifference of the central station toward acquiring added load of this character."

To compare this archaic reasoning with the Sherman Law theory of compulsory competition or the specious arguments in favor of municipal ownership, is to ascribe to the editorial writer of the *Electrical World* a mass of unclean whiskers or an ambition for political office. We are convinced that he has neither. Therefore, the editor in question must be—how shall we express it tactfully?—let us say, unhampered by experience or knowledge.

For, in the first place, reasonable equipments of "electrical appliances of the kind mentioned at lighting prices" are NOT distinctly luxuries. The ordinary family of five persons might have, to cite a generous example, a toaster, percolator, chafing dish, flat-iron, washing machine, suction sweeper, sewing machine motor, shaving mug, cigar-lighter, and fan. For convenience, we schedule these up, showing the wattage, average hours' use per month, and cost of operation, figuring the current at ten cents per kwh.

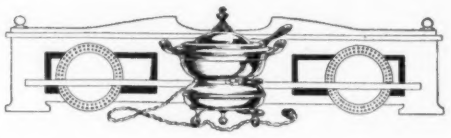
Appliance	Hrs. use per mo.	Consumption	Cost at 10c per kw. hr.
Flat Iron	12	500 watts	.60
Toaster	5	600 watts	.30
Percolator	10	400 watts	.40
Chafing Dish	4	500 watts	.20
Shaving Mug	8	150 watts	.12
Cigar Lighter	2	75 watts	.02
Washing Machine	8	200 watts	.16
Suction Sweeper	15	60 watts	.09
Fan	120	33 watts	.40
Sewing Machine Motor	20	33 watts	.07
	Total cost per month		2.36

This same householder, with a family of five, probably pays at least $2.50 a month for light alone. Can it be said that an equal amount is too much to pay as the running cost of the appliances which not alone cook all of the "quick" items on the household menu, but eliminate the drudgery, cut the time necessary for housekeeping in half, and make even a frail woman completely independent of servants?

It is not the *World's* lack of accuracy, however, which disturbs us; anyone could prove, as we have, the unsoundness of the writer's knowledge or reasoning. The danger is that too few will take the trouble to even question, much less attempt to disprove, a statement by so eminent an authority. And the complete acceptance of this blunt statement that "electrical appliances of the kind mentioned at lighting prices are luxuries, and rather expensive ones," means trouble for the lighting company and the tightening of a tension already too great.

The popular press will seize upon it as *prima facie* evidence of the general extortion practiced (in the popular imagination) by central stations everywhere. The disgruntled contractor, who ascribes all of his difficulties to the central station, will find in it an excuse for his non-success in selling appliances and will be ready with "inside information" to assist the agitation for rate concessions. Those appliance manufacturer's salesmen who sometimes seem to know no more about electric service than is contained in their firm's catalog, will find here an excellent argument to induce their customers to clamor for a special rate.

Of course, this editorial in the *Electrical World* is not going to upset the industry, but it shows the danger of constituting a technical writer as an authority upon commercial subjects.



N. E. L. A. Members 10,750; Central Stations, 1,000.

The February issue of the *N. E. L. A. Bulletin* announces that the rapidly growing membership of the National Electric Light Association had reached and passed a total of 10,750. There are now more than 1,000 central station systems represented in this membership.

Iowa Electrical Convention.

The annual convention of the Iowa Electrical Association will be held in Des Moines on April 24 and 25 in the Coliseum Building, coincident with an electric show which will run from April 23d to 26th.

The following papers have been assigned: "Building Up a Day Load for Small Central Stations," "Central Station Heating by Hot Water and Steam," "Representative Motor Installations in Iowa," "High Pressure and Low Pressure Steam Turbines," "Boiler Room Economies," and "The Care of Consumers' Meters."

National Contractors' Convention.

Announcement is made that the annual convention of the National Electrical Contractors' Association will be held this year in Denver, Colorado, on July 17th, 18th, and 19th. The Convention headquarters will be at the Hotel Albany. Special cars will be run from Boston and New York, making up into a special train from Chicago to Denver.

Michigan Association Joins N. E. L. A.

In publishing the itinerary of the annual convention cruise of the Michigan Electric Association, announcement is made that this has been merged into the National Electric Light Association as a geographic section and henceforth will be known as the Michigan Section of the N. E. L. A. The convention will be held on board the S. S. Majestic of the Northern Navigation Company of Canada, leaving Port Huron on Friday, June 21st. The trip will extend to Mackinac Island and return, a five-day sail, and the cost of the trip to members will be thirty dollars.

An Advertising Talk from The New York Evening Mail

One of the most popular evening newspapers in New York City is *The Evening Mail*, a "home paper" that at the same time probably has a larger following among the business men of the metropolis than any other daily journal. A great many people attribute this popularity largely to a series of "Advertising Talks" which has been running nightly for nearly three years, written by Mr. Wm. C. Freeman, a very prominent newspaper man and the advertising manager of the paper. They are plain, straightforward, heart-to-heart talks on honesty, candor, and co-operation in business and the value of going direct to the public in a personal way and telling what service you have to render.

Mr. Freeman has become very much interested in the "People's Page Idea," which is now operating so successfully in many cities, as described in the December 1911 issue of SELLING ELECTRICITY. He is co-operating with prominent New York Jovians toward the organization of a similar electrical page for the *Evening Mail*, and to get a better idea of the ideals and methods of the Jovian Order, he attended the recent rejuvenation at the Hotel Astor. The following Advertising Talk No. 982 described his impressions and should be of more than passing interest to all electrical men:—

ADVERTISING TALKS
Written By
William C. Freeman.

"I was initiated into the order of the Rejuvenated Sons of Jove recently.

"Do you know what a Son of Jove is?

"I will tell you.

"A Son of Jove is an electrical manufacturer or an electrical worker. I am neither, but I was let into the order because in my particular line of newspaper work I am credited with applying an electrical current—shedding light—so to speak—on advertising methods and urging co-operation as the basis of successful advertising and business management.

"The Sons of Jove are men associated for the purpose of improving conditions in the electrical world—working together—co-operating—giving one another a square deal.

"At the banquet in the Hotel Astor there were 126 men initiated. There were then 6,600 members. There are more now. Thomas A. Edison is a member and gives the order his moral support. That means a lot.

"One other purpose of the organization is to take up advertising in the several cities throughout the United States in a definite, co-operative way.

"The electrical shops in a community can combine to buy a page of space—using a part of the page for their display business cards and the rest of the page to a plain, easily understood talk on electricity and its uses and on electrical appliances and their uses—in short, giving the people just such information as is wanted, and furnishing them the names of electrical workers in their own neighborhoods, whom they can call on, order what they want, and get prompt attention.

"Individual shops dealing exclusively in electrical appliances could not afford an advertising campaign on a large scale on their own account, but in combination they can afford to advertise in a very impressive, effective, intelligent manner.

"You see organization and co-operation are strutting through the land.

"When will professional men organize—

dentists, physicians, lawyers, engineers, architects—and advertise to the public their qualifications—the advertising to be an indorsement of their skill and integrity?"

These "Advertising Talks" are syndicated and on March 5th this story of the rejuvenation appeared also in 65 of the leading newspapers in other cities. In several of these cities "Peoples' Electrical Pages" have already been organized and are in successful operation. In the majority of them, however, the opportunity still waits without encouragement. It would be interesting to know how many central station men who read Mr. Freeman's tribute to the co-operative electrical page idea, as it appeared in the latter cities, have taken up this suggestion and set to work to make it pay right there and now in better business for every local electrical interest.

Moving Picture Advertising in Leavenworth, Kansas

The Leavenworth (Kansas) Light, Heat & Power Company reports a very profitable experience with moving-picture advertising, a film entitled "Every Husband's Opportunity," having been loaned to them by the General Electric Company. The film was 1,100 feet long and pictured the use of the modern electric household devices, under conditions sufficiently humorous and entertaining to hold the interest and win the enthusiastic approval of the audience.

The film was put on at two performances, and the manager of the vaudeville theatre reported that altogether fully 1,500 people saw it. The charge he made for exhibiting the film was one cent per foot, or a total of $22 for both performances.

The Leavenworth Light, Heat & Power Company arranged with an enterprising local contractor to run his advertisement with the film, for which he paid $15. The net cost to the central station, therefore, was only $7 for advertising these household applications of electricity to 1,500 possible prospects.

Mr. Geo. H. McCormack, formerly General Sales Manager and Treasurer of the Opalux Company, has joined the sales force of Gill Brothers Company, Steubenville, Ohio. Mr. McCormack has charge in the east of the new line of *Parian* marble-white, semi-translucent, high-efficiency glassware for electrical work. His New York address is 35 Warren Street.

A New Method of Increasing Electric Revenue in Shoe-Shining Parlors

By R. F. Landers
Special Power Representative Lincoln Gas and Electric Light Co., Lincoln, Neb.

This year has seen an increase in the number of tan shoes worn by both men and women, and the fact that in polishing tan leather a liquid is used which has to be dried before the polish is applied, offers an opportunity to the central station, for heretofore the drying has been done either with a rag or a palm-leaf fan, which is a very slow process. By installing 8-inch fans of the regular desk type and using the stand as a handle, it is possible to do the drying much quicker and better than with the old method, and it can be made a sufficient revenue-producer for the central station to warrant the necessary sales effort.

Good Campaign Literature For N. E. L. A.

There is a type of man known as a "joiner" whose coat lapel, vest flap, and watch chain serve no better purpose than to support a mass of society and association insignia. There is another type, sometimes referred to as a "crab," who takes positive pride in being an outsider. Between these two extremes is the man who takes membership in such associations as he is convinced are working earnestly and sensibly for practical advancement. To such a man, both the "joiner" and the "crab" are incomprehensible—the one because he spends more time in being a member of something than the membership is worth; the other because he so obviously neglects his opportunities.

It is to point out the error of his ways to the latter that John G. Learned and Herbert Seymour of Chicago have issued a little broadside entitled "The Sad Fable of the Chronic Non-Member."

"An Employe of a certain Central Station Company who had Seen the Ghost regularly twice a Month for several Years, was urged time and again to join the Company Section of the National Electric Light Association and be a Live Wire. But he never made the Connection.

"He would have been willing to become a Member had it not Cost Anything; but Five Simoleons looked to him like a Cough that might prove Fatal, so he said that he couldn't see the Benefits. As most of the Bunch were into Company Section Doings up to their Eye-brows and liking it, this Parsimony became ingrowing, because he realized that he was a Maverick, and became Grouchy and Pessimistic. He argued, however, that this Attitude proved his Independence and showed that he had Individuality.

"He stuck around for several Years, but finally got wise to the fact that when a Good Thing was Passed Out it went to some N. E. L. A. Worker, while his own particular Career seemed to have the Brakes Locked.

"Finally he said: 'Lo ! I have been Lost in the Shuffle. They don't Appreciate me here. I will get out and go where real Ability is Recognized.'

"He then Applied to a similar Company in another City for a Position, and handed them a great Spiel about his all-around Grasp of the Business and his Efficiency as a Specialist.

"Before deciding to let him put his Forefeet in the Trough, the Manager suddenly said: 'I presume that you've been Active in the N. E. L. A., in your old Connection, of course?'

" 'No—No,' replied the Chronic Non-Member, 'I didn't Join.'

" 'Indeed?'

" 'Why, er-er-somehow or other I-er—well, I never did; that's all.'

" 'You were with them how long?'

" 'Nine Years.'

" 'Well, we need a couple of day laborers, but all our Good Jobs are taken by men who are Really Interested.'

"This touching Scene appeared to be the only thing in his Repertoire, as it Repeated in four Towns in rapid Succession, after which the Bridgetender heard a Splash and a Gurgle.

"MORAL: IT IS MORE BLESSED TO BOOST THAN TO BE DRAGGED ALONG."

A Pipe Thawing Feat.

A remarkable feat in pipe thawing was recently accomplished by the engineers of the New York Edison Company. On North Brothers Island, in the East River, are situated many of the buildings of the City Hospital. The only connection with the mainland is by ferry and all water for the island population is delivered by a 6-inch water main under the river. In January this pipe froze and the water supply was shut off. For a month, water was carried to the hospitals by water carts and water boats, for a thaw was expected daily. The water supply was entirely inadequate, however, and the situation finally became so serious that the Edison Company was called on for relief.

Within an hour the Edison forces were at work. A temporary sub-station was erected at the island end of the frozen pipe and a bank of four 100-kw. transformers was installed to step the current from 2,000 to 200 volts. The pipe was severed at a point on each river bank and put in circuit. A current ranging from 800 amperes at 200 volts to 1,300 at 400 volts and at times as high as 1,900 amperes was maintained, for a period of five days, when after a long period of steam escapement the water began to flow. Varying water pressures were applied during the process.

"Pacific Service."

The following five ' points' are submitted in a recent issue of the *Pacific Gas and Electric Magazine*, the house organ of the Pacific Gas and Electric Co., of San Francisco. They appear under the heading "Regarding Service," and are well worth reading.

Point 1.—The measure of respect you show to other people is the measure of respect you feel for yourself.

Point 2.—Courtesy is an obligation, an indicator, an introduction, a passport, a lesson, an influence, an opportunity, an investment, a peace-maker, and a pleasure.

Point 3.—Courtesy is something the public has a right to expect. It is doing and saying the right thing at the right time, in the right way.

Point 4.—*It raises your standing with the company.*

Point 5.—Boost the service of this Company by always being courteous.

New Business in Muskogee.

Mr. Wm. H. Hodge, Publicity Manager for H. M. Byllesby & Company of Chicago, says:—

"How is this for results for one week by a central station new-business department in a city of 30,000 people? This particular department is in charge of Mr. Norman B. Hickox and belongs to the Muskogee Gas & Electric Company of Muskogee, Okla. Here are the figures, as set down in our weekly bulletin:—

"New-Business Department, Muskogee, Okla., secured this week 52.6 kw. in new business, including lighting and power service for the Baltimore Hotel (70 rooms), one roof sign to contain 203 lamps; service for a moving picture theatre (to be the largest in the city), lighting for the editorial rooms of the *Times-Democrat*; 12 five-light "white way" luxolabra posts and one 10 hp. motor for a feed mill."

Easton Companies Combine.

Announcement has been made that Meikleham & Dinsmore, of New York City, have acquired the Easton Gas & Electric Co., of Easton, Pa., where they are already operating a competitive electric plant, the Eastern Pennsylvania Power Co. The two electric departments will be consolidated and the gas department will be run as a separate organization. The Easton Gas & Electric Co. was formerly operated by Henry L. Doherty & Co.

Mr. W. E. Quillen, who has been in charge of the sales department of the Easton Gas & Electric Co., has been transferred to the Knoxville (Tenn.) Gas Co., where he will be in charge of special development work.

Mr. H. A. Waite, formerly power man at Easton, has gone to the Trumbull Public Service Co., Warren, Ohio.

Mr. Luther Gaston, also of the Easton sales force under the old management, has joined the Massillon (Ohio) Electric & Gas Company.

J. H. Drake.

Mr. J. H. Drake has resigned his position as superintendant of lighting for the Knoxville (Tenn.) Railway & Light Co. to assume the general-managership of the central station in Morristown, N. J., the Morris & Somerset Electric Co.

Mr. Drake is succeeded in Knoxville by Mr. Geo. H. Smart, formerly with the General Electric Co., in Boston.

R. J. Andrus.

Mr. R. J. Andrus, formerly local manager for the Pacific Power and Light Co., at Pasco and Kennewick, Wash., has severed his connection with that company to assume the position of sales agent for the South Bend Electric Co. and the Mountain Spring Co., of South Bend, Wash.

W. C. Duncan.

Mr. W. C. Duncan has resigned his position of Commercial Manager for the Leavenworth (Kan.) Light, Heat & Power Company, to take up similar work in Lawrence, Kansas, where he is now in charge of the sales department for the Lawrence Railway & Light Company.

Mr. Duncan is succeeded in Leavenworth by Mr. T. B. Kindig, who has been one of the Leavenworth salesmen, having come there from the sales department of the Colorado Springs Light, Heat & Power Company.

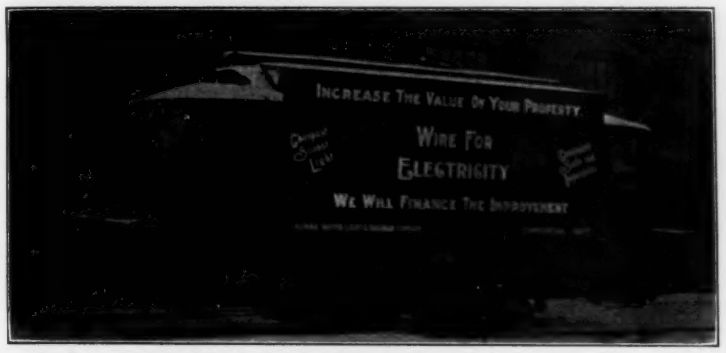
Co-operation Sells Signs in Galveston.

As evidence of what can be accomplished by aggressive co-operation in the sale of electric signs, the Brush Electric Company of Galveston and the Valentine Electric Sign Company of Atlantic City, working together, closed contracts within a single week for signs aggregating 34,700 lamps.

Prior to Mr. Valentine's arrival in "The Treasure Island of America," some very clever press agent work, as well as straight advertising, was done by the Brush Company, under direction of George Williams. As result of this preparatory publicity, the merchants of the city were about as anxious to buy Valentine signs as Valentine was to sell them. We reproduce one of the "advance notices" herewith.

One of the Little Oft-Missed-Tricks.

The Elmira (N. Y.) Water, Light & Railroad Co. has put its sand car to work for the sales department. Signs have been painted



on the sides of the car to boost for the company and as shown in the picture it makes a far more interesting sand car today than is seen in most cities.

A Pace Maker Meter Dial

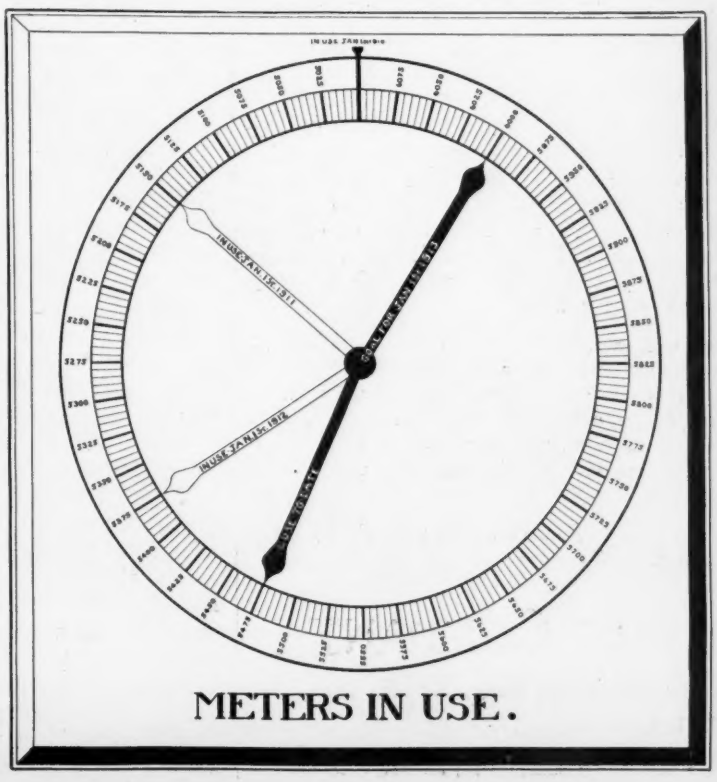
Mr. H. N. McConnell, commercial manager for the Susquehanna Railway, Light and Power Co., has introduced among the properties operated by his company a most ingenious "pace maker" dial for speeding up the gain in meters. A special dial is made up for each company with numerals commencing with the number of meters in service for that company on, say, Jan. 1, 1910. Then a pointer is painted on the dial indicating the number of meters gained in 1911, and another pointer showing the net increase in 1912. Besides this there are two movable hands, one to mark the goal that has been set for the current year, and the other to record the daily progress. Every day, the net increase of meters set, over meters removed, is indicated by the advance of the "progress hand," and if good work and good fortune send this progress hand beyond the pace-maker, the pace-maker is set ahead for a new burst of speed.

The Union Gas and Electric Co. of Bloomington, Ill., is the most recent of the Susquehanna properties to adopt the use of this dial. Mr. J. A. Perkins, General Manager, says, "We know of no other thing in the commercial department that arouses as much enthusiasm among the salesmen as an opportunity to move this black hand ahead after a good day's business. Mr. Perkins describes the way in which their dial was constructed as follows:—

"We had a frame, 48 inches square, made out of 1 1-4 inch by 7-8 inch pine, with a bar extending across the center to stiffen the frame and also provide a mounting for the hands. The frame we covered with paper-covered cloth, such as is used in map making; and to give it a neat appearance we tacked on some 1 1-4 inch picture moulding at the edges.

"On the dial we painted three circles for figures and divisions, with an extreme diameter of 43 inches. The figures we made 1-2 inch in size and numbered from 4925 to 8,000, placing them 25 numbers apart. The heavy divisions on the dial were for 25 meters, and the figures were placed on a line with these heavy sub-divisions. In between the heavy divisions were four light divisions, making each space represent five meters.

"The dial contains one black movable hand showing the meters to date and one red movable hand, showing the point which we wished to reach at a given time. In addition to this, we painted with aluminum paint a dummy hand, indicating the number of meters in use three years ago; a second dummy hand indicating the meters in use two years ago; and a third dummy hand indicating the number in use a year ago. The space between these three hands forms a graphic record of meters gained during these years."



New England Section Convention

A particularly interesting convention was held by the New England Section of the National Electric Light Association at the Kimball Hotel, Springfield, Mass., March

Harold T. Sands, Pres. N.E.L.A., New England Section

21 and 22. About 300 delegates and guests were registered, the latter including President Gilchrist, Secretary Martin, and Vice-President Tait of the National Association. Chairman Harold T. Sands, of the New England Section, was in the Chair.

The program was short and the papers of great value and interest. Discussion on every point was lively. The meeting opened on Thursday at 2 p. m., with Chairman Sands' address, in which he reviewed briefly the year's progress. An important feature of this address was the announcement of the Executive Committee's ruling regarding Class E members:

"On the membership question, which has been interpreted differently, the executive committee of the national body holds that any contractor or contracting firm doing a local business as distinct from a national business might individually become a class E member of the association upon the approval of a class A member in the same territory, and that their employes may become class E members whether their employers are members or not. This interpretation not only opens up a tremendous field for increasing the membership but also affords the central station an opportunity for establishing more cordial relations with the wiring contractor. With the growth of the industry the contractor is being recognized not as an enemy but as an ally of the central station.

The first paper was by Mr. L. L. Elden, of Boston, on "Load Factor and Power Factor: How to Improve Them." Just a suggestion of the value of this paper will be gained from the following paragraphs:

"It has been suggested that to illustrate the importance and desirability of certain classes of business, it is desirable to keep before the solicitors the load curve of their own system that they may study the low parts of the curve and search for business best adapted to fill those portions, without affecting the maximum peak in like proportion. Further, a general knowledge of the investment required for different classes of services should properly impress the solicitor with the undesirability of some lines of business as central station consumers and, in a measure, restrain the oftentimes too strenuous effort to increase the connected load equivalents without due regard to the consequences to the system in general.

* * * * * *

"Ventilating systems involving the use of power for driving fans may either be discontinued or reduced in capacity during peak-load periods without effect upon the business, as in modern installations the practise of making very frequent changes of air is noted.

* * * * * *

"A pumping unit of the centrifugal type arranged to be driven either by steam turbine or electric motor, has been found economical from all points of view in the supply of service for hydraulic elevators in one department store served from a central station system. With this arrangement the pumps are driven by the steam turbine during the heating season, the exhaust steam being delivered to the heating system of the building with the result that there is no demand on the electric system during the heating season of seven months each year. During the remaining five months the same pumps are driven by the electric motor, the whole cycle of operation effecting a substantial gain in the customer's load factor when compared with the usual installation for similar purposes. The requirements for vacuum cleaning, coal conveying, refuse disposal, restaurant lighting, and dumb-waiter service in department stores, naturally fail to coincide with peak-load hours, and if they did such use of power could in some measure be avoided by a study of its application."

Equally interesting was Mr. C. R. Hayes' paper on "The Relation of the Central Station to the Wiring Contractor," which we print upon another page of this issue. This paper called forth a discussion which was doubly interesting because participated in by several electrical contractors from Providence and Worcester. Mr. Hayes' contention, briefly, is that the central station and contractor can best profit by working in the closest harmony. From this Mr. C. M. Addis of Brattleboro dissented, citing his own experience. The contractors and many of the central station men were with Mr. Hayes, and the debate was sharp until Mr. L. D. Gibbs of Boston closed the discussion by some very pointed and witty remarks.

The luncheon on Friday was scheduled as a meeting of the Boston Electrical Luncheon Club, said to be the largest organization of its kind in the country. Over 290 sat at luncheon and afterward listened with interest to a stereopticon lecture on electrical development in the Northwest, by Mr. W. H. Blood, of Boston. Mr. Blood gave the members present a foretaste of the wonders they will see at the next National Electric Light Association Convention in Seattle, and his talk was rewarded by prolonged and genuine applause.

The afternoon session was devoted to "The Development of the Electric Vehicle in New England," by Fred H. Smith of Worcester, and the report of the Rate Committee. At the conclusion of Mr. Smith's paper, the Chief of the Springfield Fire Department called out some of the electric fire apparatus of the city on a special alarm to demonstrate the efficiency of electric drive for this service.

The Convention closed with a banquet, at which President Gilchrist made an able address and other officers participated.

The Flasher as an Aid to Both Selling and Service

There is a psychological difference between the effect of the flashing sign and the effect of the steady burning sign, on the man who owns it. It is a difference that points a real opportunity to the salesman, for the impression a sign makes on its owner is after all close akin to its influence on the public. If it is small, steady burning and not very conspicuous, he soon becomes used to it and it ceases to arouse his enthusiasm as it did at first. On the other hand, if the sign is alive with personality and action, it is an irresistible attraction to this owner's eye no less than to the public and he is conscious of its undiminishing value.

What we all want is service. The merchant wants service in his sign, and the sign that he knows is ceaselessly at work for him is always giving satisfaction. The steady burning sign renders a service no less constant, but here's the point from where the salesman sits: the service from the flashing sign is unforgetable and that is worth much to the central station and everybody else who profits from the sale of electric signs. It means that the prospective sign customer can be referred to men who are still enthusiastic, because their signs are still *working* as busily as on the day they were bought.

And there is another factor of more immediate influence to the salesman: the flasher reduces the current bill. After all, it is the monthly maintenance cost that the merchant really considers when buying a sign. Convince him that it is advertising he is buying, and that the purchase price should be spread over the year as a monthly advertising appropriation, and the whole question of cost gets down to one of current consumption. Therefore, if your man can afford but $25 a month for maintenance, don't sell him a sign that will cost that by steady burning; sell him a bigger, brighter, better sign and equalize by the use of a flasher and Mazda sign lamps. Give him a sign that is alive with action, a sign that delivers the maximum efficiency in far-reaching, never-flagging sales appeal.

How great a reduction in current consumption can be effected by the use of flashers, is indicated by the following statement recently made by one of the leading flasher manufacturers:—

"A double-face sign, which is flashed on alternate sides," he said, "will save, theoretically, 1-2 by reason of the fact that only 50 per cent of the lamps are burning at any one time, the other 50 per cent being dark; however, in actual practice we find that with the little lost motion in switching the current on and off, together with what the motor consumes to drive the flasher (which in no case runs over 35 watts) there is an actual saving of from 40 to 45 per cent.

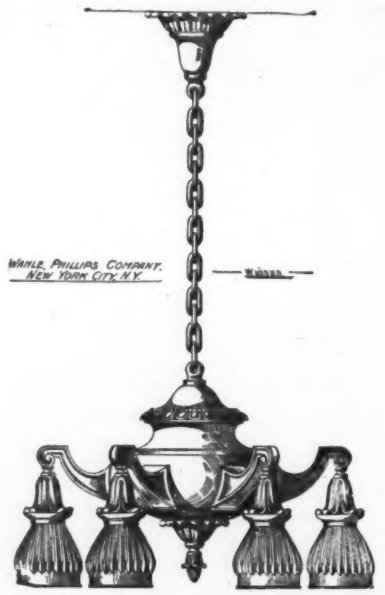
"The saving on the spelling type flasher, which spells out a word, then all out, and then pronounces it as one, will save from 35 to 38 per cent in the light bill. A flasher operating a traveling border for flames or fountains, will save 25 per cent. The crawling snake effect in a border saves 75 per cent. If there are 200 lamps in a snake border, not to exceed 40 or 50 will be illuminated at one time.

"A double-face sign containing 200 20-watt 4 cp. lamps has a total consumption of 400 watts per hour when burning steadily. If a flasher is employed to flash the sign on alternate sides, the wattage consumption will be about 235 to 240 watts." What

an opportunity for the sign salesman! Combine the economies offered by the flasher and the Mazda or tungsten sign lamp, and the sign is just so much more attractive to the merchant.

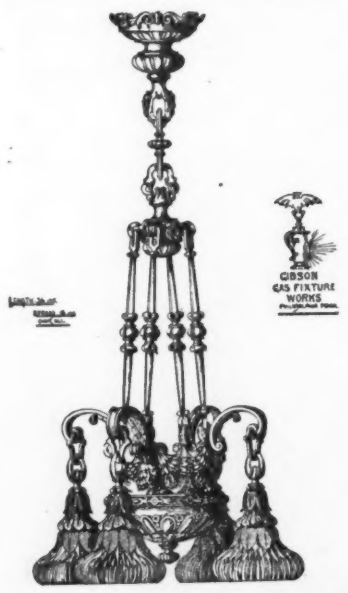
New Combinations of Fixtures and Glassware

The choice of reflectors and especially the choice of shades designed primarily for decorative effect has always been largely a random matter governed principally by the taste or fancy of the purchaser and the influence of the salesman. The element of efficiency has had but a small influence in such selections up to recent times, and there



is still little more thought given to the harmonizing of fixtures, reflectors, and the architectural character of the building to be illuminated. Yet, here, certainly is an opportunity worthy of the consideration of the architect and the careful study of all manufacturers of lighting fixtures and glassware.

The Holophane Company of Newark, Ohio, has taken an important and interesting forward step toward the realization of



such a co-operation between the two fields of manufacture and has just issued under the suggestive title of "Arts and Crafts in Fixtures and Glass," a portfolio containing at present 30 new combinations of fixtures and glassware, illustrating the aesthetic and harmonious effects that can be secured through the use of the recent types of Holophane decorative reflectors with various fixture designs by the leading manufacturers.

The Holophane Company contends that it is not necessary to entirely sacrifice illuminating efficiency in order to secure rich and appealing treatment of fixture and glassware. Highest efficiency, of course, can only be secured through strict adherence to scientific principles, as in the standard Holophane lines, but in the Holophane Residence Line Reflectors and the later decorative types, modifications have been developed which are extremely artistic and at the same time produce an illumination far superior to the conventional shades of glass, opal and the like. There is also a wide diversity in design which provides harmonious equipment for the varying styles of fixture.

The glassware and fixtures shown in the new Holophane portfolio represent the best product of the leading fixture houses of the country and the combinations effected are the result of co-operation between these manufacturers and the Architectural Department of the Holophane Company. Each combination is shown on a separate sheet, giving the fixture maker's name and catalog number and descriptive data covering the glassware, and will serve as suggestive material valuable to architects and engineers.

The "Standard Electric."

A new electric vehicle, made by the Standard Electric Car Company of Jackson, Mich., and called the "Standard Electric," has just been placed upon the market and has received considerable attention in the automobile journals. *The Motor World* says:—"It is an automobile and not an 'electric carriage' in the strictest interpretation of the terms."

The coupe model which sells for $1,850 is large and roomy, with two battery compartments in the front and rear, accessible entirely from without the car body. The car is driven by a propeller shaft rigidly connected to the motor and rear axle. Exide batteries are used.

Have You Seen This Booklet?

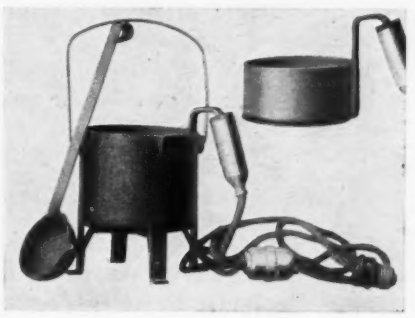
One of the most thoroughly artistic and helpfully suggestive manufacturer's publications that the industry has produced has just been issued by the General Electric Company. It is entitled "Electric Heating and Cooking," and is apparently a master presentation of the opportunities for the use of modern electric service, particularly in the home. It is divided into four sections on the heating element, appliances for lighting circuits, appliances for heating circuits, and wiring plans for the home. The heating section departs somewhat from strictly household appliances, taking up various types of hotel, laundry, bindery, office, and other special equipment. The wiring section is most complete with wiring plans and installation suggestions that are worked out in a style and language that is clear and helpful to the public. On the plans, for instance, the outlets are indicated, not by a cross or circle, but by a tiny black lamp or fixture; while switches and many appliances are shown in the same unmistakable manner. Three installations are suggested, one for a house costing less than $5,000; one for a $5,000 to $10,000 house, and one for a house still larger. These plans are all the more interesting because it is stated that one of them is an actual home in Schenectady and another a residence in Montpelier, Vermont. The whole book is strikingly illustrated in color and will be prized by every man who is fortunate enough to receive one. The bulletin number is 4921.

New Electric Solder Pots

Electric solder pots for individual use form the most satisfactory, economical, and safest means of melting and keeping in a liquid state such metals as solder, lead, tin, and babbitt. They reduce the fire hazard, keep the loss of metal through oxidization to a minimum, and introduce no unhygienic conditions, such as fumes and smoke, into the work-room. The uniformity of the temperature of the melted metal is also a valuable feature; if the pot is kept filled, the temperature of the metal will always be at the proper point.

The use of individual pots insures good, rapid work. Where the melted metal must be carried to the work in ladles, a great deal of the workman's time is lost, and the metal cools rapidly, thus making bad joints. There is also a considerable loss of metal as the residues are not always returned to the melting pot. Furthermore, with individual pots the danger of serious burns to workmen is practically eliminated.

The new Westinghouse pots are substantially constructed in order to withstand the abuse to which they are subjected in service. The pot is made of drawn steel, and though light, is very strong. The heating element is of the immersion type; separate from the pot and in direct contact with the metal to be melted. This insures quick melting and high efficiency. None of the heat is wasted



as it must pass through the molten metal before any can escape. The heating element is hermetically sealed under pressure in an iron jacket and is said to be practically indestructible.

The heater can be run at two temperatures, the high heat for melting the metal quickly and the low heat for keeping it in a liquid state. A push-button switch controls the temperature and indicates which heat is being used. An iron ladle is regularly supplied with each pot.

Helps for the Business Man.

There are today many business men who, unfortunately for themselves, are doing without many things which would enable them to work in greater comfort and, in general, conduct their business with increased efficiency. That such a state of affairs exists is not the fault of the business men but rather due to the fact that they have not been told in the right way. Realizing this, the Western Electric Company has recently published an attractive little book aptly named "The Silent Partners—A True Story."

The book, written in an easy, colloquial style, is so convincing that the reader wants to invest in everything described therein. The advantages of Western Electric Interphones as time and step-savers; of desk,

bracket, ceiling, and counter fans as creators of coolness; of ventilating or exhaust fans as fresh-air producers, and of large and small motors for shop and factory use, are set forth cleverly.

An Equipment For General Domestic Power Service

We often wonder whether the fact that there is such a variety of domestic power apparatus available can possibly act in some cases as a deterrent. Everybody naturally wants to own the motor-driven devices for freeing housework from physical toil, everybody finds the idea itself enticing, but when they begin to reckon the cost of a motor-driven sweeper, a motor-driven washtub, a motor-driven grinder, and the rest, it seems to the householder, perhaps, like the purchase of a great multiplicity of electric motors. And the cost is high. It is apt to establish an entirely unmerited prejudice against all household electrical devices as being extravagantly expensive, and stand between the central station and a home that can well afford to utilize these modern comforts to the utmost.

Therefore, such equipment as the new Federal Household Power Table should be

of great interest to both central station and contractor, to any man who sells electrical merchandise. It offers one general utility outfit that will do almost every power job in the household.

As shown in the illustrations, this equipment consists of a table with a 1-4 hp. motor mounted on the lower shelf, and the necessary transmission gear to operate the various appliances. A detachable driving

shaft and pulley is provided, which is attached to the power arm in the same manner as the other apparatus and drives the ice-cream freezer or any other light household machinery. Thus two different machines may be driven at the same time, or one machine can be run from the lower belt pulley while the table itself is left free for such other uses as may be desired.

Electricity is supplied through a 10-foot connecting cord securely fastened to the table and fitted with detachable connecting plug for connection with the nearest lamp socket. All gears are enclosed, eliminating any danger to even the most inexperienced

operator. The current is turned on or off by a snap switch conveniently placed on the right-hand side of the front of the table.

In the kitchen, the Federal Power Table will perform practically all the operations necessary in the preparation of food. In the laundry, it can be used to run the washing machine, wringer, or the mangle and still "have one hand free" to turn the ice-cream freezer, run the knife sharpener, or shave the soap for washing at the same time. In the workshop, it will suggest dozens of different uses, for it can be used as a lathe, drill or buffing machine. In small shops it will be found a convenient source of power for driving emery wheels, small pumps, blowers, jig saws, or lathes. In fact, wherever a quarter horse-power motor can be used, the Power Table is ready to do the work at a moment's notice, and it moves on easy-running casters that make it as simple to handle as a chair.

A complete equipment of 11 attachments and appliances has been designed for use with the Power Table, all heavily nickel-plated and easily cleaned. These consist of bread mixer, cake mixer, coffee grinder, food chopper, ice-cream freezer, egg beater, vegetable slicer, food grater, apple and potato peeler, knife sharpener and knife polisher. A buffing wheel can also be used for polishing silver. This equipment is sold by the Federal Sign System (Electric) of Chicago.

100 Cleaners a Day.

An indication of the rapidly-growing popularity of electric-suction cleaners comes from the Premier Vacuum Cleaner Company of Cleveland, Ohio. This company makes a "bag-type" machine of moderate price that has proved most successful in operation. After one and a half years, the Premier Company reports a daily output of over 100 machines.

Betts & Betts Move

Betts & Betts, manufacturers of the "New York" flashers and color caps, have moved their New York office and factory to more commodious quarters at 254 West 55th Street.

An Interchangeable Catalog of Interchangeable Fixtures

The accompanying picture shows the ingenious device which has been utilized in a new catalog recently issued by the Tungstolier Company of Conneaut, Ohio, to demonstrate the principle of their TTC Tungstolier, a sectional lighting unit, with interchangeable parts. This catalog is made up of sheets on which are reproduced the full line of TTC Tungstoliers, each complete fixture occupying a full sheet. The sheets are gummed and bound on all four sides,

and then so cut that the various sections of each fixture—stems, arms, bodies, and canopies—are each on a separate segment of the sheet or page. By lifting up these segments, as is shown in the picture, any combination of parts can be readily produced and studied.

The principle of the TTC Tungstolier is unique. With a set of 86 assorted fixture parts, it is possible to build up 1,944 different and distinct fixture combinations. Every one of these combinations can be effected and compared by the manipulation of this new sectional catalog, and the salesman can practically demonstrate the entire line, in all its variations, by simply interesting the customer in this book.

What the Electric Incubator Offers

Until you sit down and figure out the number of people who keep chickens in the average suburb or small city, the opportunity for the sale and use of electric incubators seems of relatively small importance. But the figures are interesting. There are mighty few families who possess a back yard where there is not at least one chicken enthusiast. It offers business to the central station salesman and the contractor.

Everybody knows how the incubator works, but until the electric outfits came, the care necessary to keep the lamps going at proper temperature has been a matter of constant fuss and risk, and this has discouraged the amateur, and limited the use of incubators largely to those who are actually in the business. In the Reed Self-Regulating Electric Incubator, however, the problem has apparently been so well solved as to offer a machine that should prove immensely popular. The heat is controlled automatically so that no care is necessary except the daily turning of the eggs, which is done, a tray at a time. That means that the incubators will be free from the old risks of spoiled eggs.

The Reed incubators are made in four sizes, holding 70, 120, 200, and 260 eggs, and are advertised to consume 8, 10, 14, and 25 kilowatt hours, respectively, per complete hatch. Mr. W. E. Clement, contract agent for the New Orleans Railway & Light Company, in commenting on his

experience with these incubators in the March issue of SELLING ELECTRICITY, said: "We find upon investigation that the small-sized incubator, carrying 120 eggs, used approximately 12 kwh. to the hatch, with the period of incubation running about

21 days. The next size of 200 eggs capacity consumes about 20 kwh. and on our retail rate these devices earn a net return of about 10 cents per kwh., which seems entirely satisfactory to the consumer. After making careful tests, a large poultry yard of this city has given an order for an 8,000-egg incubator, replacing a steam equipment, which has been in use for many years; we figure that this customer will consume about 600 kwh. per month with a steady 24-hour consumption."

Though a 12 kwh. consumption does not promise a very heavy revenue for the central station, still when you consider that the hatching season extends from March to July, in periods of three weeks, there may well be four or five hatches to an incubator with a total income from a 70-egg machine, at a 10-cent rate, of six dollars or better. So at this season of the year when the subject is an appealing one it is well worth serious attention, for there is also the profit on the sale.

Here is a proposition to lay before the bride and groom who have just gone to housekeeping and have a backyard big enough to keep a few chickens.

The Reed apparatus is made by the Electric Manufacturing Co. of New Orleans, La.

Savings in Fuel and Food

A recent catalog issued by the Detroit Fireless Stove Co. of Detroit, Mich., gives some interesting data on the economies which are offered by the use of the electric fireless cooker. The following comparison

of the time and fuel consumed in the ordinary processes of cooking by coal or gas range and the insignificant use of current where applied through the "cooker" principle is a strong argument.

To boil ham in the old-fashioned way

takes 4 hours steady gas or coal.

To boil rice in the old-fashioned way takes 3 hours steady gas or coal.

To boil oatmeal in the old-fashioned way takes 4 hours steady gas or coal.

To boil beets in the old-fashioned way takes 3 hours steady gas or coal.

To boil cabbage in the old-fashioned way takes 60 minutes steady gas or coal.

To boil potatoes in the old-fashioned way takes 25 minutes steady gas or coal.

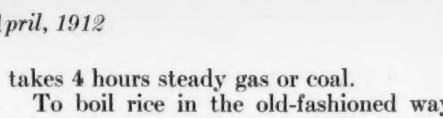
To roast beef in the old-fashioned way takes 3 hours steady gas or coal.

To roast chicken in the old-fashioned way takes 2 hours steady gas or coal.

Moreover, it is claimed that fireless cooking saves all the rich juices of meat, instead of drying them up. All the nutriment and flavor of vegetables and fruit are retained—not dissipated in the air. For example:—a 6-pound roast of beef cooked in the old-fashioned manner loses a pound and a half while a 6-pound roast of beef roasted in a fireless cooker loses only a half pound.

"The pound you save is the best part, too," they say, "and the roast is more tender and better in every way when roasted in the Detroit Fireless. Instead of a fireless cooker being considered a luxury or just a convenience, it should be considered as an absolute necessity. Anyone who continues the old-fashioned method, burning up fuel just for fun, simply blinds himself to his own loss, as the economy and bodily comfort of the fireless way are scientific facts."

The Detroit Electric Fireless Cooker is made in several sizes providing different equipment in cooking utensils. It is claimed that with a 10-cent rate for current, it costs about 4 1-3 cents a day for the preparation of the three meals, which means, of course, all roasting, boiling, stewing, and similar cooking adapted to the fireless cooker principle.



Discount Day Demonstrations

By J. H. Bailey
Salesman, Federal Sign System (Electric), Kansas City, Mo.

I have just come from Shreveport, La. All bills are payable in the office of the Shreveport Gas, Electric Light & Power Company between the 1st and 10th of each month. During those days they have the most attractive and best-looking of the office girls demonstrate some type of heating appliances in the lobby of the office. Glue pots and soldering irons, as well as toasters, flat-irons and shaving mugs are exhibited, and each month they give a prize of one dollar to the girl who sells the greatest number of appliances. It works out well, and a number of sales are effected.

Letting the Customer Test His Meter

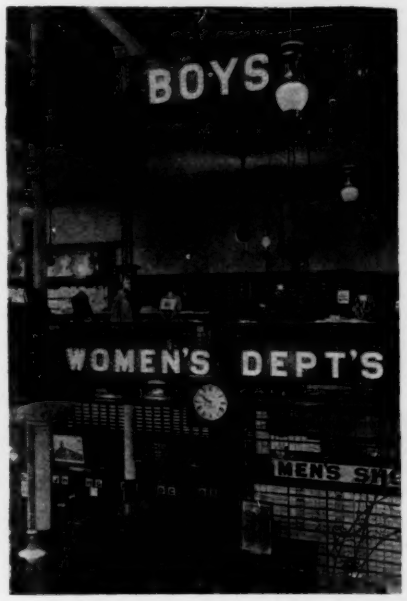
By E. B. Korst
Com. Agent Oregon Power Co., Eugene, Oregon

I adopted a rather novel means the other day of pacifying a residence consumer who "knew" his meter was fast. I suggested that he turn on four 25-watt tungsten lamps for five hours, thereby consuming 500 watts, or one-half a kilowatt, and then see how much the meter registered during the test. He understood that each space on the right-hand dial of the meter measures a kilowatt hour and reported that the indicator moved exactly one-half a space, thereby registering one-half a kilowatt hour. He paid his bill with the satisfaction of knowing that his meter registered correctly.

Indoor Signs

In the big department stores and in the little ones, too, they are using small electric signs more and more to mark the departments and to herald special sales. And electric advertising is quite as effective and appropriate here, as on the street, for the bright spot catches the eye and carries its message.

Colored lamps, red, green, and amber, are used very largely to strengthen the effect



Two indoor signs in a Minneapolis department store

during the daylight hours and in many cases the lamps are miniatures, sometimes equipped with a flasher so as to spell out the words—HATS or RIBBONS, or whatever it is. It's a clever device for the arcade, as well.

DOLLAR IDEAS

To Show the Influence of Wall Paper

FROM F. L. CHASE,
New-Business Department, Sayre (Pa.) Electric Company

We have adopted a new method of demonstrating the influence of wall coloring on illumination to enable us to convince our prospects and customers as to the amount of light necessary, under the varying conditions of interior decoration.

We have taken a space 10 feet by 12 feet in our salesroom, and sealed it up so that it makes a perfectly dark room. Then along the side walls of the dark room we have installed rollers equipped with regular wall paper of different colors so that we are able to reproduce in our demonstration room, practically any normal conditions encountered in the average home. The ceiling is equipped with outlets for various sizes of lamps and Holophane reflectors, and we find the exhibition of great interest to our people and of no less value to our salesmen.

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The reason that many central stations can't seem to sell Electric Signs is because their salesmen try to sell *Signs* instead of *Service.*

After all, it isn't the sign itself that the merchant is interested in. It's not worth money to him, for itself alone. It's the service the sign will render that has a real cash value to him. Therefore it is SERVICE that the sign salesman should sell—not sign construction nor sign price. Price and construction are mere details to the merchant, as compared to the importance of the SERVICE he is buying; and the salesman who uses his brains and enthusiasm, presents his proposition in that light.

There's never a season, there's never a month in the year that hasn't its special opportunities and its specific arguments for the sign salesman who works with his wits. There's no "sign season." Every page of the calendar is the best possible time to sell signs, if you talk the SERVICE that is the most appealing at that moment.

I've sold thousands of electric signs. I've been a successful salesman for years, simply because I've sold signs that way. Right now I am selling to big and little merchants because I show them that spring is coming, that people will soon begin to walk about again in the evenings and a bright new sign will sell goods. That's the best, special argument this month; as good in your town as in any other.

Think this over! Go out today with enthusiasm and TALK SERVICE and you'll sell signs. I'll furnish designs that will close the deal and I'll build signs for you that will carry the most long-satisfying service that you can promise.

—T. E. Valentine.

Valentine Electric Sign Co.

Atlantic City, New Jersey